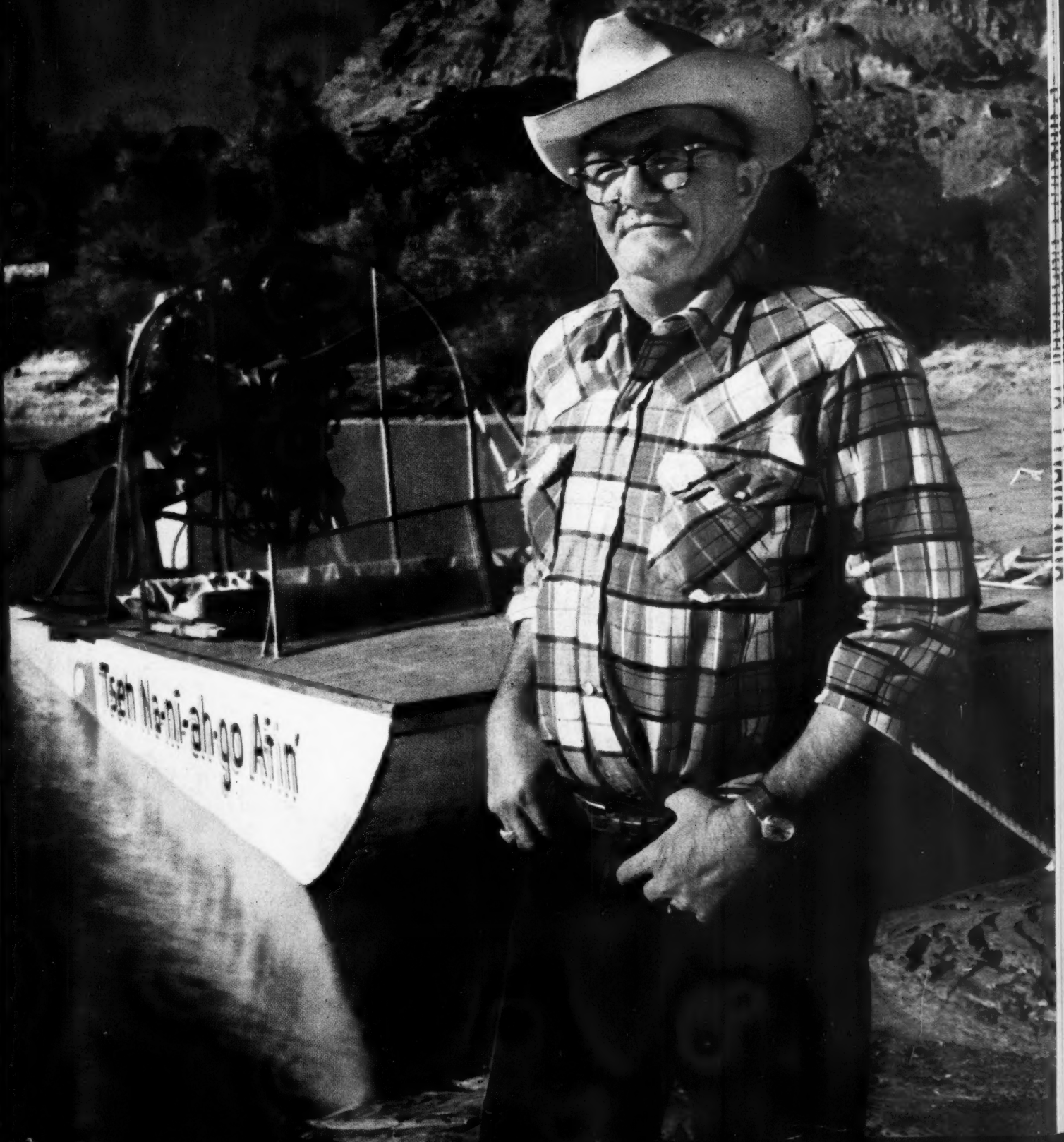


Desert

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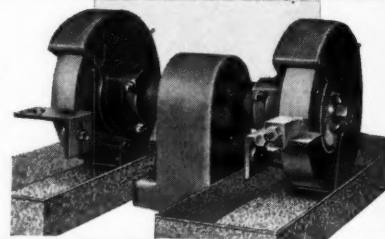
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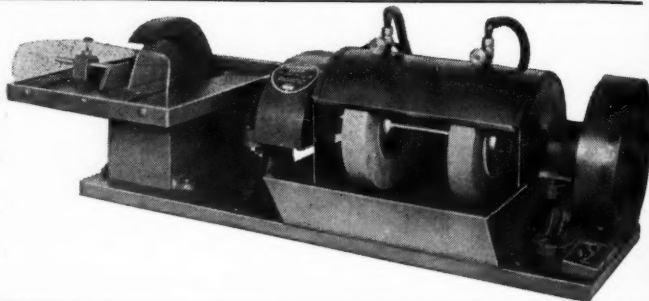
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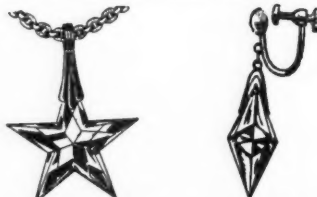
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AGINE

DESERT CALENDAR

May 30—Morongo Valley Annual Early California Fiesta, Morongo Valley, California.

May 30-31—Desert Peaks Section, Southern California Chapter Sierra Club ascent of Mt. Keynot, in California's Inyo Range.

May 30-31—Spanish Fiesta, Old Town, Albuquerque, New Mexico.

May 30-June 21—"25 Years of Progress"—exhibit detailing scientific advances made by the Museum of Northern Arizona since its founding in 1928. Flagstaff.

May 31—Lincoln County Homecoming Day, Caliente, Nevada.

June—Continuance, special exhibit of paintings of historical landmarks of California and portraits of pioneer families, by Orpha Klinker. Southwest Museum, Highland Park, Los Angeles, California.

June 2-5—20th Annual exhibition of Hopi craftsmen. Pottery, weaving, embroidery and silver. Demonstrations. Museum of Northern Arizona, Flagstaff.

June 4-6—Annual Strawberry Day, Pleasant Grove, Utah.

June 4-6—Pioneer Days, Clovis, New Mexico.

June 7—Corpus Christi Sunday. Outdoor religious processions from St. Francis Cathedral and Christo Rey Church, Santa Fe, New Mexico.

June 12—Fiesta of the Loma, Taos, New Mexico.

June 12-17—Future Farmers of America Rodeo, Santa Rosa, New Mexico.

June 13—Fiesta, Sandia Indian Pueblo, New Mexico.

June 13—Ceremonial dances, Taos Pueblo and San Ildefonso, New Mexico.

June 13—Feast of San Antonio de Padua, celebrated at Cordova and various other rural villages in northern New Mexico.

June 14—Procession of La Conquistadora from St. Francis Cathedral to Rosario Chapel, commemorating reconquest of New Mexico from the Indians by DeVargas in 1692. Santa Fe, New Mexico.

June 18-20—Quay County Sheriff's Posse Rodeo, Tucumcari, New Mexico.

June 19-21—Second Annual Mojave Trail Exposition and Panorama, Barstow, California.

June 24—Annual fiesta and ceremonial dances, San Juan Pueblo, New Mexico.

June 24—Corn Dances, Taos and Acoma Pueblos, New Mexico.

June 25-27—Rodeo, Vernal, Utah.

June 27-28—Fifth Annual Indian Capital Rodeo, Gallup, N. M.



Volume 16

JUNE, 1953

Number 6

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The village of Minersville, Utah, founded 95 years ago with the discovery of the Lincoln Mine, drowns beneath shady trees in a small green oasis completely surrounded by dry desert hills.

Forgotten Mine of the Mormon Pioneers . . .

Nell Murbarger, headed for Minersville, Utah, on the trail of the old Lincoln Mine, little dreamed she'd find there a couple who had spent all their lives in the isolated desert community. Moroni Myers, who came to Minersville 85 years ago, and his wife, who was born there, remember the Lincoln lead mine at the height of its production and recall much about life in the early Mormon settlement. Nell Murbarger tells their story—and the story of the Lincoln, once an important link in Brigham Young's chain of empire and believed by some to be the first mine discovered in Utah.

By NELL MURBARGER
Photographs by the author
Map by Norton Allen

SAGE AND juniper of Southwestern Utah have spread their mantle over trails deep-etched by the wheels of forgotten wagons. Gray lizards warm themselves on sun-toasted sills and crumbling stone walls; and over the venerable streets of Minersville, Time has laid that engulfing peace common to old towns which have had their day and sung their song.

When I turned my car off Utah State Route 21 and headed down the main street of this old Beaver County

mining camp, it was not because I expected to find there any man who had shared in those long-ago boom days. At that time, I had never heard of Moroni Myers, so it seemed a little presumptuous even to hope that I might locate someone who could show me the site of the old Lincoln mine.

History of the Lincoln had fascinated me for a number of years. This interest was attributable, in part, to the important role played by the mine in development of a pioneer empire;

and, partly, to the common belief that the Lincoln had been the first mine discovered in the State of Utah. Even before gaining the attention of Americans, this rich lead deposit in the Mineral Mountains is supposed to have been systematically worked, either by Spaniards or Mexicans. At an unknown time, and for an unknown reason, the mine was apparently abandoned, and even its site was eventually lost to man's knowledge.

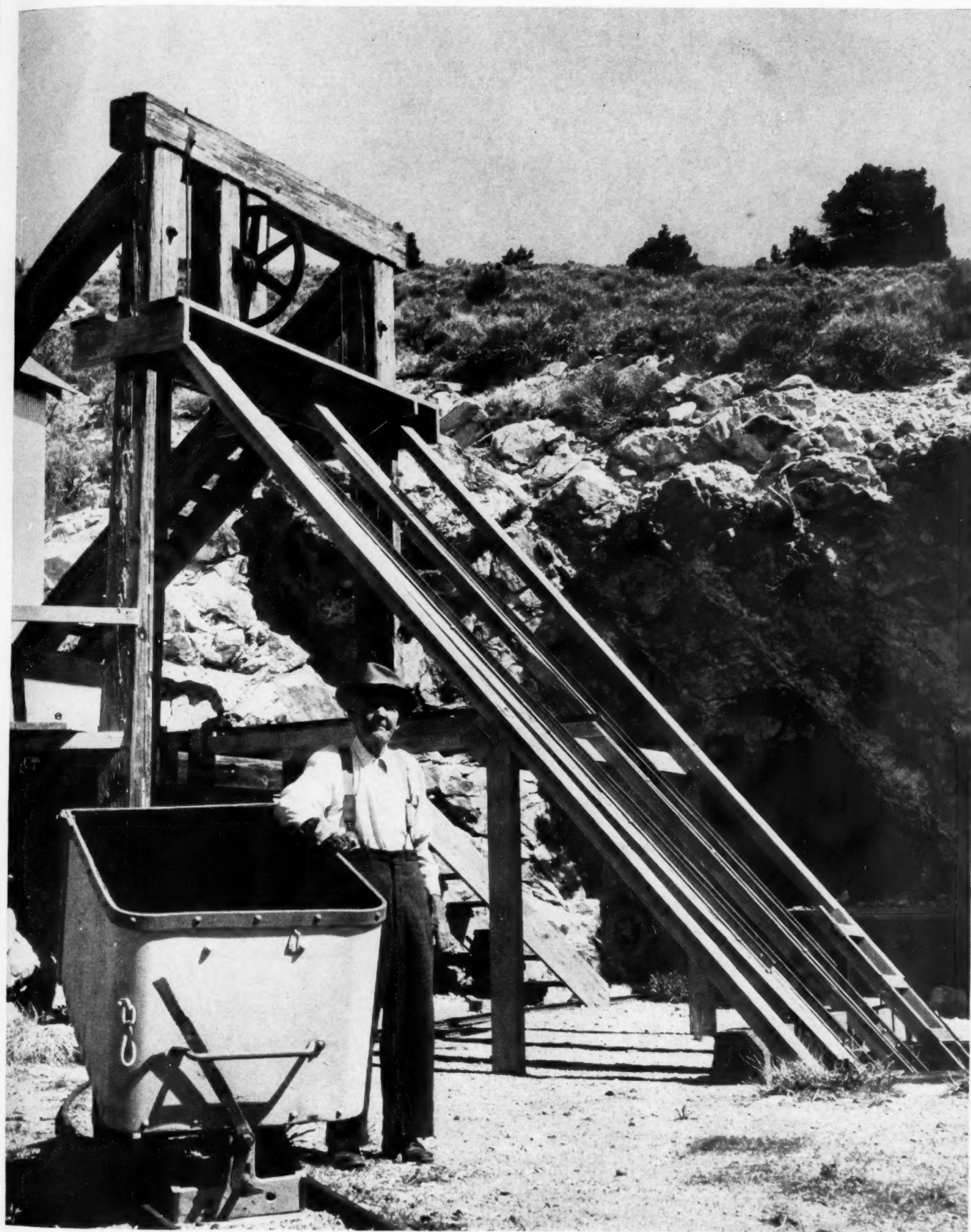
In the early 1850s, the loyal followers of Brigham Young swarmed over Utah, prospecting every dim corner for natural resources which might contribute to their progress. With idolatry of material wealth condemned by their church, these Mormons had little interest in the superficial glitter of gold and silver. Rather, they were seeking potential farm land, water and timber and building stone—any useful element which might be turned to the upbuilding of a raw and rugged land.

No desert canyon had been left unexplored, no mountain range had gone

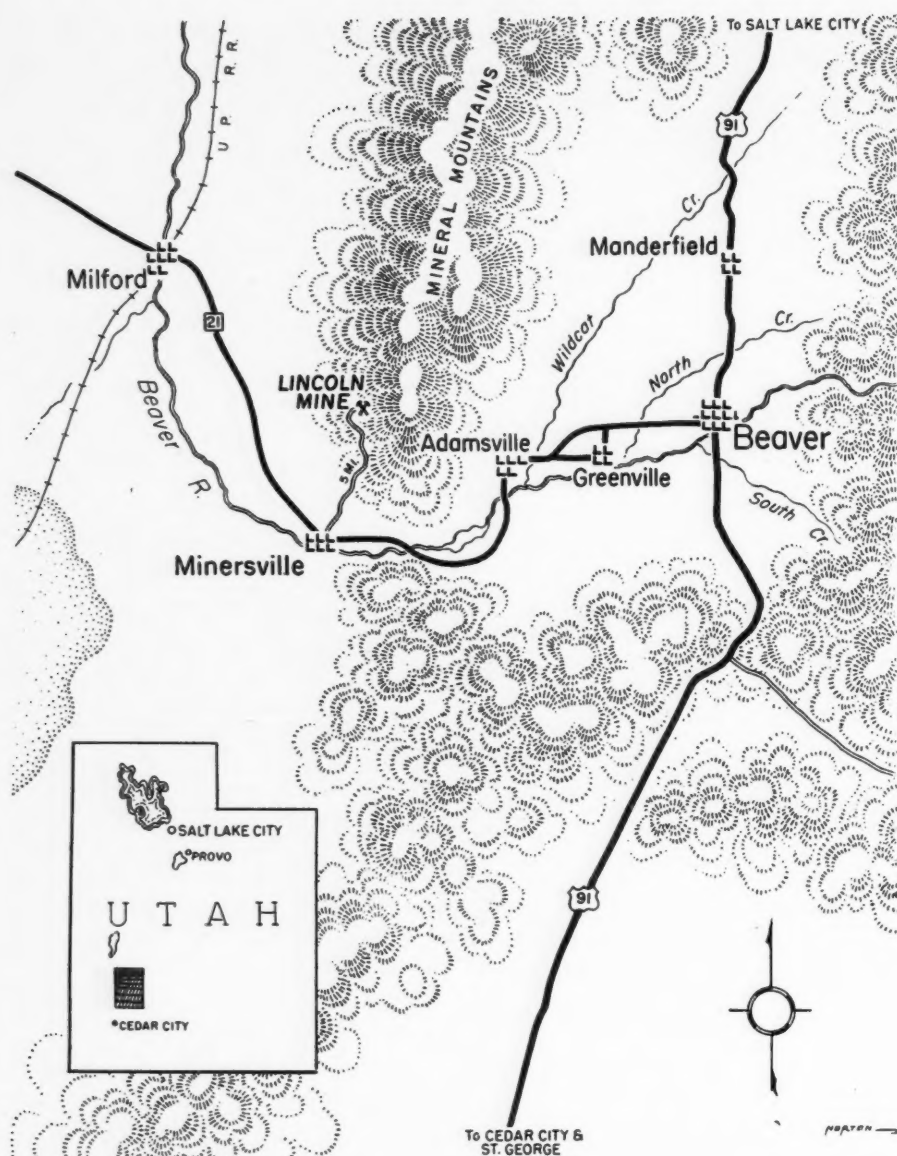
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AZINE



Moroni Myers, resident of Minersville for 85 years, stands at the headframe and incline shaft of the old Lincoln Mine, discovered and worked by the Mormons in their early empire building days.



unvisited. Coal ledges and deposits of native iron ore had been discovered, and smelters established at Cedar City and Iron City had become the first mills in the Western United States where raw ore was transformed into the vital iron of commerce. Cast in local foundries and shaped on the anvils of frontier blacksmiths, this iron had gone into use as gears for flour mills and saw mills, as plow-shares and wagon tires and ox shoes.

With the iron industry barely launched in Southern Utah, the fledgling settlement of Great Salt Lake City had been electrified by the news of a rich lead discovery in the Mineral range, 18 miles west of Beaver. This was in the autumn of 1858; the discoverers were Isaac Grundy, Jesse N. Smith, Tarlton Lewis and William Barton, all of Parowan.

When samples of the ore were shown to Brigham Young, the Mormon leader immediately became enthused and directed that a company of men

establish a settlement near the mine and develop the vein. In addition to the four discoverers—each of whom received a 200-foot claim when the location was finally recorded on December 7, 1870—the founders of the town of Minersville included John and Samuel Lewis, John Blackburn, Edwin Bingham and James H. Rollins.

During the first year of its revived operation, the Beaver county lead producer functioned under the name of "Spanish Mine" or "Old Spanish Mine." In April, 1860, when James Rollins became bishop of the Minersville ward, the mine was renamed "The Rollins." Not until 1870, when it was first recorded, did the mine assume the name of a martyred war president, a name it has continued to bear for 82 years.

This, and other skeletal information, I had gleaned from general sources—from old newspaper files, court records and biographical manuscripts in possession of the Utah State Historical

Society at Salt Lake City. But the flesh-and-blood story of the Lincoln and the town it fathered was something I hoped to learn through a personal visit to Minersville.

Halting at the small general store, which seemed to comprise the main business section of the town, I asked if there was some old timer who might be able to show me the site of the old mine and give me a little authentic information concerning the early days of the town.

"See Moroni Myers!" was the quick answer. "If Moroni can't give you the help you need, there's no one who can!"

When the same question, put to another of the town's inhabitants, produced virtually the same response, I was satisfied that Moroni was the man to see.

Following directions given, I soon drew up before an old adobe brick house set down in a mass of old-fashioned flowers and vines. A man working in the garden laid down his hoe and came up the path to meet me.

Although so lightly built that one gust of wind might have whisked him away, Moroni Myers was strong and hardy. His bright old eyes held a wealth of good humor, and, I imagined, a trace of deviltry. As for being the town's historical oracle Moroni flatly disclaimed any such distinction.

"How could I know anything about the early days at Minersville?" he blustered. "Heck! I'm just a Beaver boy. Didn't even move to this fool town till 85 years ago!"

"Eighty-five years!" I repeated incredulously. "Then you can remember when the Lincoln Mine was operating?"

"The Lincoln?" he exclaimed. "I should remember when it was operating. I worked there!"

It had been a long while since he had been over the old freight road to the mine, but he believed it still might be traveled.

"Had some hard storms last winter, and the road may be washed out in places," he warned. "Even when it's in good condition, it's rough, and a little steep..."

When I assured him that my faithful old car thrived on rough, steep roads, and that I was thoroughly experienced with washouts and the business end of a shovel, he went into the house to fetch "Mama," and the three of us were on our way.

Mrs. Myers—Moroni's wife for 64 years—proved to be comfortably plump and completely likeable; and, like her husband, came equipped with a built-in sense of humor.

As I eased the car over the rutted

trail that pushed ever higher and deeper into the rocky hills to the north of Minersville, my hosts told of their youthful days in the old mining camp.

"Don't believe anything this woman tells you about the early days here," Moroni said, with a broad wink. "She's nothing but a Johnny-come-lately. Only been here a measly 80 years!"

"Well, at least," retorted Mrs. Myers, "I was born here. I didn't have to sneak in from Beaver!"

"Yeah," said Moroni succinctly. "She was born in a cellar!"

Mrs. Myers explained that her parents and brothers, who were natives of England, had emigrated to Utah after their conversion to the Mormon faith.

"Reaching America, the folks came directly to Minersville, and Father and the boys immediately set to work making a big cellar or dug-out for the family to live in.

"It was roofed with cottonwood poles and willow brush and capped with sod," she continued. "Father made all our furniture from cottonwood limbs. Even the bed I was born in was built of cottonwood poles with rope woven back and forth across them to support the mattress.

"Sometimes when I tell city folks how we lived here when I was a girl, they seem to think that it must have been a terrible sort of life. But I don't know," she laughed. "I seem to remember the fun we had much more clearly than I remember the hardships!"

"My brothers were very musical. They had brought with them from England a concertina and a fiddle. 'Most every evening a bunch of young folks would gather at our cellar home for a dance. No matter how hard the boys had worked during the day, or how early they had to rise the next morning, they were always ready and willing to provide dance music for the crowd."

Like Mrs. Myers' family, Moroni's father and grandparents had emigrated to Utah from England — his father stopping for a while at Cincinnati and later moving to Beaver, where Moroni was born. Less than a year later, the family moved to Minersville where Moroni's grandfather and grandmother had located earlier.

"Father and grandfather spent most of their time prospecting the canyons or working in the Lincoln mine, which was always the big producer of the region," said Moroni.

We had reached the end of the old road, about five miles north of Minersville. We parked the car in the junipers and walked the last hundred yards up a steep rocky trail. Scarring the mountainside ahead of us was a bleak dump.



Mr. and Mrs. Moroni Myers who have resided in the old camp of Minersville, Utah, for a total of 165 years. (He for 85 years; she for 80 years.)

A gaunt, weathered headframe stood silhouetted against the sky. On a short length of rusty track stood a lone ore car. It was only mid-morning, but heat waves already were beginning to rise from the roof of a small tin shed that drooped against the dun-colored hillside. In the brush, somewhere behind the shed, a quail was calling.

"There you are," said Moroni. "That's the Lincoln mine—what's left of it!"

That this common-looking incline shaft could be the Old Spanish Mine, whose history so long had fascinated me, seemed incredible! Here was a mine whose known story had spanned virtually the entire Anglo-American occupation of Utah; a mine whose ore had supplied the bullets which brought to frontier settlements a measure of freedom from hunger and protection against marauding Indians.

And yet, to look at it in a superficial way, was to see the counterpart of a thousand other shafts which have pierced the mountains and deserts of the West!

As Mrs. Myers wandered over the hillside in search of stray ore samples,

Moroni and I fitted our backs to the sun-warmed timbers of the old headframe and discussed what we knew of those long ago days when this dark silent hole in the earth had been the Big Mine of the Minersville district.

For the first two or three years after re-discovery of the Old Spanish Mine in 1858, extraction of the lead bullion from the rich ore had been accomplished by means of a primitive Mexican-type furnace. Later, said Moroni, a larger smelter had been erected at Minersville and while it, too, had been a crude affair, it had proven surprisingly effective. Placed in a large "cup" over the firebox, the ore had been subjected to extreme heat. As the molten metal formed in the cup, a drain in its bottom could be opened, thus enabling the pure lead to be run into molds.

In *Heart Throbs of the West*, Volume VI, published by Daughters of Utah Pioneers, I had read a brief paper dealing with the history of the Lincoln; and from it, I knew that this soft, gray, vitally-needed metal had come to Utah's struggling colonists like a gift from the gods.



Old brick schoolhouse at Minersville, attended by both Mr. and Mrs. Moroni Myers almost three-quarters of a century ago.

"After the mine had been opened up and sufficient ore mined, the lead was taken to Salt Lake City by wagon and team," Mrs. M. D. Zabuskie and Melassie Lee, both early settlers of the district, recorded in the paper. "Henry Rollins, the bishop of Minersville, took one load to Salt Lake and traded the same for groceries which were hauled back to Minersville by team and distributed among the poor in the town. The first shoes made available for the inhabitants of Minersville were brought in at this time."

Melassie Lee, daughter of Bishop Rollins, often recalled that when she was a girl of eight or ten years, she had helped day after day to mold the lead bullion into bullets for the settlers to use in defending themselves against the Indians. The bullion also was cast and used as money, "which," the manuscript naively stated, "was quite a curiosity in those days."

After production had increased to such an extent that the little smelter at Minersville no longer could handle the output of the mine, the ore was freighted to Milford for smelting.

At last, after many years of successful operation, water flooded the Lincoln in such volume that it could not be brought under control by any method then available. Work accordingly ceased and the Lincoln lay idle until about 1900. Taken over by English capitalists, the old mine then was subjected to complete renovation; a new shaft was sunk and costly pumping equipment installed. After several years of intermittent and desultory operation, however, the Lincoln again

was closed — and closed it remains today.

As we made our way back down the twisting road leading from the mine to the valley, Moroni Myers directed me to halt the car at the point where we emerged from the canyon and could look out over the thousands of acres of desert hills spreading away to the south and west of Minersville.

"See that old trail winding through the hills, yonder?" His pointing finger indicated a faint gray scar on the gray-brown breast of the desert, far to the south. "That used to be the main road to St. George. Went by way of Rush Valley. I worked on that road nearly 70 years ago—back in the days when it was still being traveled by stage coaches and covered wagons, and a wheelbarrow was the most complicated piece of roadworking machinery that we had!"

When I asked if he ever had driven stage, he shook his head. "No," he said. "I never drove stage; but I did do lots of freighting."

During the mining boom days at Silver Reef, Utah, and Pioche, Nevada, he explained, there was great demand for teamsters and freighters. Since he preferred an outdoor life to work in the mine or smelter, he had followed this occupation for a number of years. Generally speaking, it was a business that paid well; but like any other business, said Moroni, there were times when things went wrong.

"One time I bought a fancy new wagon. Pretty as a picture on a bank calendar!" the old man chuckled. "Freight rates were sky-high, and I

figured I'd be able to pay for my new wagon with the first load or two of goods that I hauled from the railroad to Silver Reef.

"Well, the first load I carried was a big shipment of dress goods and groceries consigned to one of the general merchandisers at The Reef. Included in the load was a five gallon can of coal oil.

"The roads, at that time, were rough as a 30 cent washboard, and full of chucks and ruts. I was young and in a hurry, and the load bounced and rattled around until that pesky can of coil oil managed to upset and spill itself over all the other stuff!

"I didn't know anything had happened, of course, until I got to The Reef—but when that merchant found his shipment completely saturated with coal oil, he was so mad he made me freight for him without pay until I had worked out the value of that entire load of goods. And then," said Moroni, "he was still mad!"

We were back in town now, driving through the quiet tree-shaded streets which these two old folks have known during all the days of their long lives.

"Roney and I went to school in that old brick building, yonder," said Mrs. Myers. "Classes, in those days, were divided by readers instead of grades, and the highest it was possible to go without leaving Minersville was the fifth reader—about the same as the eighth grade today. We had only one teacher for about 80 pupils," she laughed. "You can imagine how much individual attention we got!"

While Minersville never gained any special note as a wild and wooley boom camp, the town was not devoid of its rougher element. There was considerable drinking and gambling among the lead miners and the smelter men, and Moroni recalls that the midnight darkness was occasionally disturbed by the noise of fighting and the staccato of gunfire.

But today finds all this activity far in the past, and deeply buried.

The Lincoln mine and scores of other mines and prospect holes all lie idle on the hillsides, forgotten and forlorn. The smelter has vanished like the smoke of last summer's campfires. Wheels of freight wagon and stage-coach have been silent for many a year, and towering sage has swallowed the trails over which they turned.

Only for the name it bears, and a few old timers like the Myerses who still "remember when," no one would guess that the peaceful old village of Minersville, Utah, once had seethed with the shining dreams and lusty life of a frontier mining camp.

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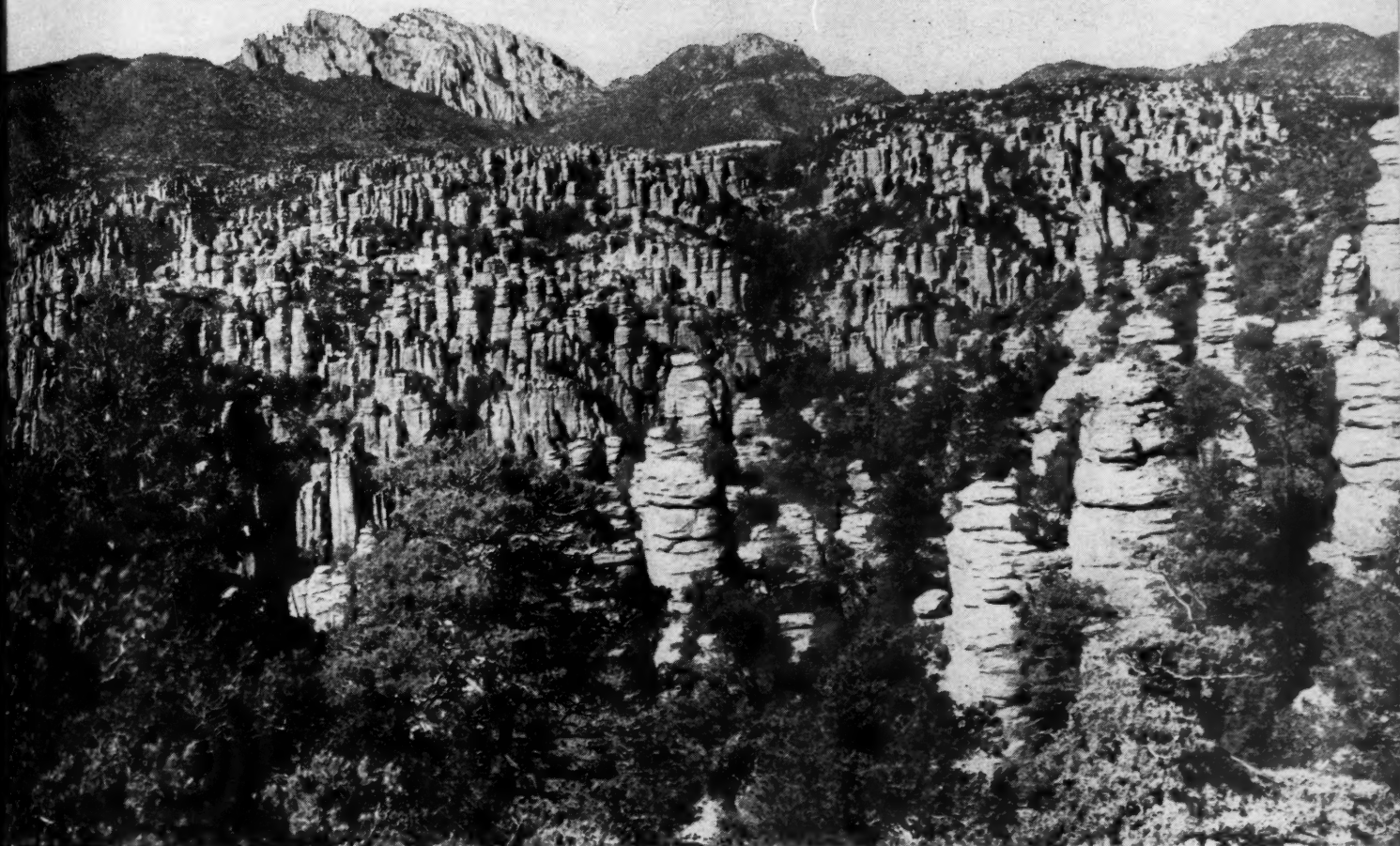
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AZINE



*Stone spires and pinnacles rise several hundred feet high above the green forested
glen of Echo Canyon, Chiricahua National Monument, Arizona.*

A Day in Chiricahua . . .

"Carlsbad Cavern without a roof!" That is the way the Chiricahua National Monument in southeastern Arizona sometimes is described. Deep in the heart of the Apache country, the Wonderland of Rocks, as it is known to local people, is the home of one of the weirdest collections of natural stone figures in the West. Here is an intimate glimpse of a scenic area which is never over-crowded with visitors.

By WELDON and PHYLLIS HEALD

Photographs by Weldon Heald

Map by Norton Allen

EVERY TIME we drive the smooth, black-topped road into the Wonderland of Rocks we have a feeling of elation. There is a delightful intimacy about this gem of a national monument situated 'way down in Arizona's southeastern corner that makes revisiting it like coming home.

Yet, along with its ever-present charm of the familiar, there is always something new to see. It may be some grotesque, unbelievable rock or some startling scenic effect—as in summer when great flashing thunderheads build up strong and fierce to threaten "China Boy," "Punch and Judy," "Donald Duck" and all the

other little people of this amazing world of stone.

We never walk through the monument without finding new flowers, rare plants, or birds we never saw before. It is a veritable paradise for students of geology, botany, ornithology and all the other -ologies, with exhibits in their particular subject neatly displayed and ready to be observed and classified.

Possibly one of the reasons this monument gives such a friendly, homey impression is that it is small enough and informal enough to possess a nickname. You simply can't imagine referring to giant Yellowstone, the Grand Canyon or Yosemite in any less dig-

nified manner than by their official names. Their size and grandeur prevent any familiarity. But that is as it should be, for kings must remain kings to all the people.

However, the Wonderland of Rocks is different. It becomes a friend immediately. In fact, you have to know it well to remember its official title—Chiricahua National Monument. The area was set aside by President Coolidge in 1924 and so named because its 17 square miles lie on the west slope of *Cheer-ee'-cow-ah*, the "Big Mountain" of the Apaches. But to us who love it and return again and again, the monument will always be just the Wonderland of Rocks.

All visitors register at monument headquarters, and 17,435 people from every state in the union did so in 1951. Here, beside Rhyolite Creek, in a great wooded amphitheater rimmed with rock is the administration building and museum.

All structures in the monument are solidly built of native fieldstone and blend unobtrusively with their sur-



At Chiricahua National Monument you are greeted by Superintendent Clair V. Cooke—the Keeper of the Rocks.

roundings. They are a heritage from the days of the hard-working CCC boys, who were also responsible for the road, the 14 miles of wide, well-graded trail, and the commodious improved campgrounds. At headquarters you will be greeted by one of the rangers or by Clair V. Cooke—the Keeper of the Rocks.

Superintendent Cooke is a quiet-spoken, gray-haired man, handsome in Park Service uniform. A true Westerner, he was born on a Wyoming ranch. Starting with the Forest Service in the Black Hills of South Dakota, Clair transferred to the Park Service. Carlsbad Caverns to Casa Grande to Sequoia was the route he took to become superintendent of Chiricahua in 1944. He has a thorough knowledge, understanding and appreciation of his monument and is happy to tell you about it or to guide you along the trails, if he can spare the time. In fact, Clair's quiet good humor seems the keynote of this little secluded world

where hustle and bustle are out of place and all visitors are encouraged to take their time, drive leisurely, walk slowly, and absorb the atmosphere as well as the wonders.

If Superintendent Cooke is away, you will be met by Robert L. Barrel, new ranger at Chiricahua. On our last visit, it was Ranger Al Henson, recently transferred from the Wonderland of Rocks, who served as guide. We saw Ranger Henson and two young men measuring the stalk of a newly-sprouted agave with a long pole.

"Playing Jack and the Beanstalk?" we asked. Al Henson lowered the pole and laughed.

"Not quite. I've been keeping a record of this agave. It's grown as much as three feet a day. Slowing up now though to around 10 inches every 24 hours." He introduced us to his assistants. "This is Mr. Goeller of Hollywood and Mr. Knowlton of North Hollywood."

Cordial relations with the visitors

were quickly established. We learned that Mr. Goeller was a speleologist. Now to save time and trouble, let us state immediately that this means a cave scientist—not a cave man, nor even an amateur "Spelunker," but one who seriously studies limestone caverns. And Mr. Goeller is considered one of America's top cave authorities. William Knowlton admitted only to being a sincere and enthusiastic outdoors lover, but that in itself is a high recommendation.

As this was their first visit to Chiricahua, we suggested that they drive with us up to Massai Point and from there walk the four-mile loop trail through Echo Canyon, then bring our car back while we would be making the longer eight-mile hike by Heart-of-Rocks down to headquarters. They were delighted with the plan, although Mr. Goeller was slightly depressed when he learned there were no caves in the rocks along the way.

The gray-brown rhyolite and basalt formations at Chiricahua have been carved by centuries of rain and melting snow from an ancient lava field of the Tertiary Period. Some 12 to 15 million years ago, so geologists say, ponderous flows of red-hot, molten lava spewed from the earth, covering the country to a depth of several hundred feet. Later the whole field was lifted bodily and tilted by the growing Chiricahua Mountains until it covered the west slope from the crest almost to the base. And what is left of it today still clings to canyon and mountainside, startling one with some of the most fantastic and outlandish rock sculpture ever carved by Nature.

The six-mile drive up to Massai Point is a revelation—an experience in fantasy. You can sense how Alice in Wonderland must have felt. On both sides of the road through Bonita Canyon rise huge stone toadstools, up-ended cigars, picket-topped cliffs, towers, spires, needles, balanced rocks and overhanging ledges defying the laws of gravity. If your imagination is in good working order you can find China Boy, with his square Oriental Hat, the mitred Bishop, Praying Padre, the Boxing Glove, the Ugly Duckling, and Cathedral Rock.

Then, on the windswept ridge of the Chiricahuas that leads to the Point, new vistas open. To the east is a glimpse of San Simon Valley, backed by blue New Mexican ranges; and on the west spread the vast level grasslands of Sulphur Spring Valley to the distant granite peaks of the Dragoon Mountains, once the impregnable stronghold of the battling Apaches.

Most spectacular from Massai Point is Cochise Head, rising four

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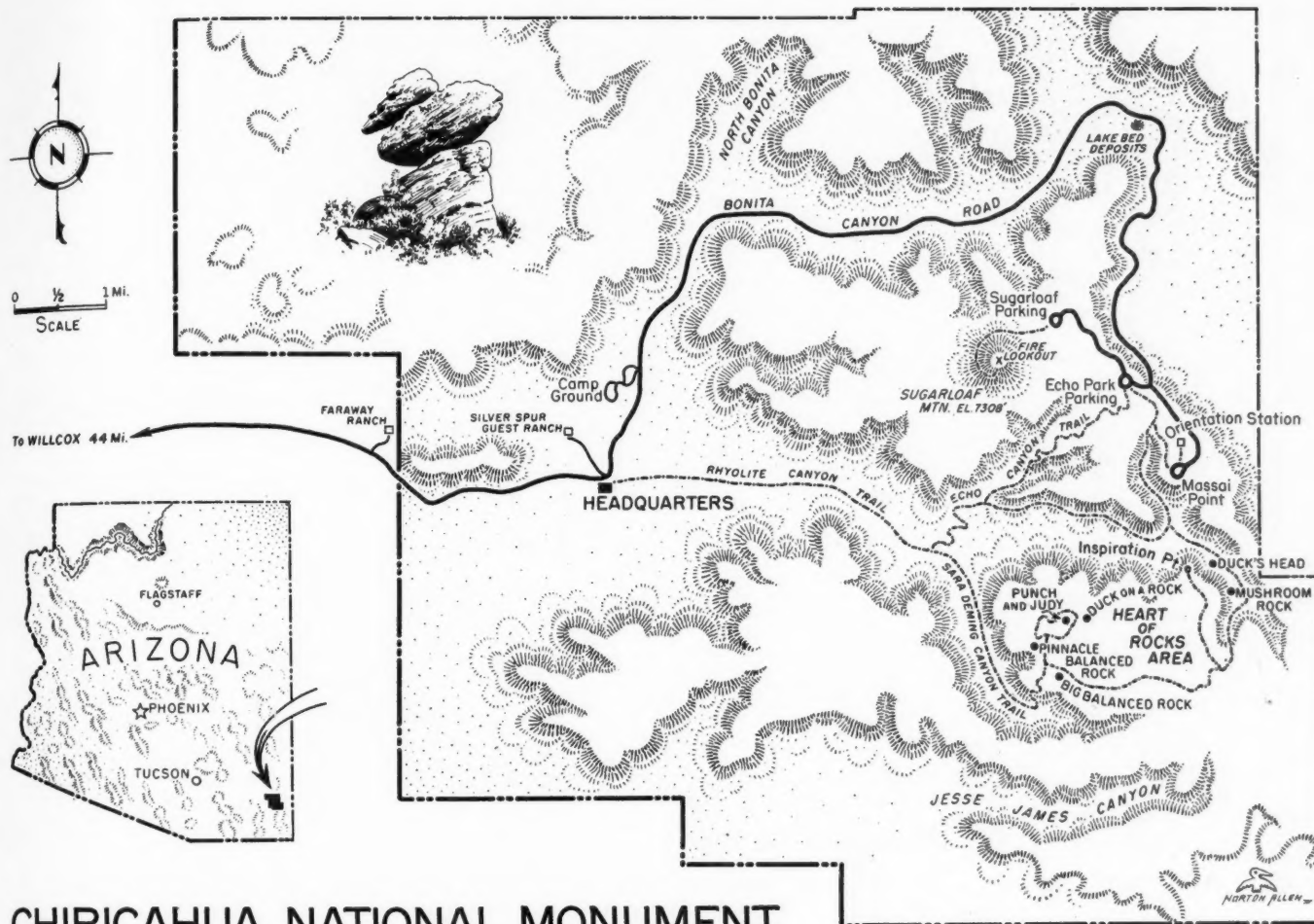
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CHIRICAHUA NATIONAL MONUMENT

miles northeast to an elevation of 8100 feet. This colossal granite profile, with domed forehead, jutting nose and a hundred-foot pine tree for an eyelash, looks serenely up to the blue Southwestern sky and is a fitting memorial to a great and wise chief who once ruled these wild mountains and outspread valleys.

Greatest of the Chiricahua Apaches was Cochise. Originally friendly to the pushing Yankees, he held his savage, warlike braves in check until the forked tongues and double dealing of the white man turned him into an implacable and relentless foe. For almost 12 years—from 1861 to 1872—Cochise and his braves swept down from their mountain fastnesses like devastating tornadoes—pillaging, burning, torturing and killing. No white man, woman or child was safe from the wrath of this avenging Apache and even the United States army was powerless against him. So he died unconquered, a great American and one of the world's foremost military generals.

However, the Apaches were finally vanquished, with the surrender of Geronimo in 1886. But among these twisted, labyrinthine rocks one lone bronco Apache lived on. He was Big-

foot Massai, a wild and furtive savage who became almost a legend. For five years he fought Americans, Mexicans, and tame reservation Indians single handed, kidnapping squaws, raiding ranches, rustling cattle and horses. Massai's huge footprints were last seen in Bonita Canyon in 1890 and it is probable that he died in the area—another proud, unconquered Apache.

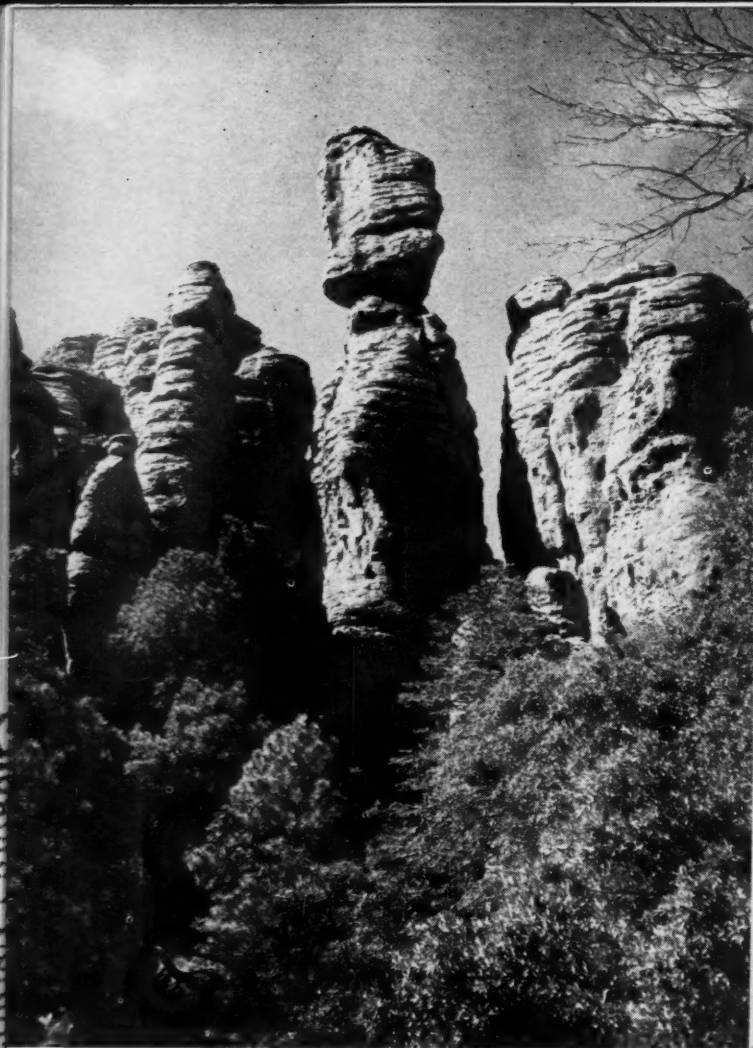
Parking at the end of the road on Massai Point, 6850 feet elevation, we wished we had brought a sandwich or two with us. Picnic tables are scattered among stunted cypresses, pinyons and junipers which have the picturesque outlines of Japanese prints. Here you can lunch with the Wonderland of Rocks spread out below—a maze of chimneys, columns, steeples and dizzily-perched rocks bristling in bewildering confusion from every canyon, slope and crest. We know of no more inspiring picnic area anywhere.

Sandwichless, the four of us started down the path together. But in half a mile we branched left, while our new friends continued ahead to make the circle through Echo Canyon back to Massai Point. They would follow up the canyon's green, forested glen between stone spires and pinnacles several hundred feet high, then thread

natural corridors among the soaring rocks barely wide enough to pass through in some places. We meanwhile climbed out of Rhyolite Canyon, passed the huge, unbelievable Balanced Rock, then took the loop path through Heart-of-Rocks, the most concentrated and extensive collection of bizarre natural sculpture in the monument.

Perpetually-quarrelling Punch and Judy and regal Queen Victoria posed stonily for their pictures, and we saw two birds new to us—but, of course, we had forgotten the bird book. One hundred and seventy of the 650 birds that breed in the United States nest within a radius of a hundred miles of the monument, and 507 species of plants, representing 80 botanical families, have been collected there.

Animals, birds and plants vary from the Upper Sonoran Life Zone in the valleys to Hudsonian atop the highest Chiricahua peaks at nearly 10,000 feet and they present a scrambled mixture of Rocky Mountain, Pacific Coast and Mexican forms, mingled with not a few which are found only in this area. The magnificent Central American coppery-tailed trogon is sometimes seen, as are thick-billed parrots, rare visitors from south of the border. You may meet on Chiricahua trails the



Mazes of chimneys, columns, steeples and balanced rocks rise from every canyon, slope and crest in Chiricahua National Monument. Cochise Head, with its great stone profile in background.



Ranger Al Henson measures the growth of an agave stalk while Tom Goeller and Bill Knowlton look on. The botanical list for the Monument names 507 species representing 80 plant families.

weird, synthetic-looking coati mundi, with pointed snout and long, upright tail, or a bristling, pig-like collared peccary. But you can walk secure in the knowledge that the last jaguar was killed in these mountains more than 40 years ago.

Mrs. Clair Cooke, Elinor to her friends, has made a study of the natural history of the area and, while she does not claim to be an authority on the birds, animals and plants of the monument, she loves to talk about them with the constant stream of ornithologists, zoologists, botanists, birders, and specialists on flowers, ferns, snakes, moss and even ants, who have found the Chiricahuas to be a happy hunting ground.

Elinor's and Clair's was a romance of the Wonderland of Rocks. For, as a visitor in 1946 at the Silver Spur Guest Ranch within the monument, she met the superintendent and became his wife. Born in Virginia and raised in Illinois, Elinor has brought a touch of the East to this Arizona wilderness. Their charming home, also stoutly stone-built by the CCC, is furnished with colonial pieces that remind one of white, elm-shaded houses in quiet New England towns.

But somehow the satiny walnut chests of drawers, four-poster beds, tables, rockers and cane-seated chairs seem fitting and at home amid their strange far western surroundings. Probably this is because they share the adaptability of their owner who has happily accepted these great mountains, canyons and valleys as her own.

From the Heart-of-Rocks we descended the shady Sara Deming Trail to headquarters where we found the others waiting for us. The shadows were deepening among the rocks above and we had 20 miles of corkscrewing mountain road between us and home.

"Where are you headed for?" we asked as we got into the car.

"We had expected to spend about an hour here, then go on to Tucson," said Bill Knowlton. "But we've sort of fallen for your monument and are going to stay at the campgrounds tonight and see some more of it tomorrow."

So the Wonderland of Rocks had made two more friends.

"It reminds me of Carlsbad Caverns without a roof," said Tom Goeller.

This, you must admit, is high praise from a cave man—we mean speleologist.

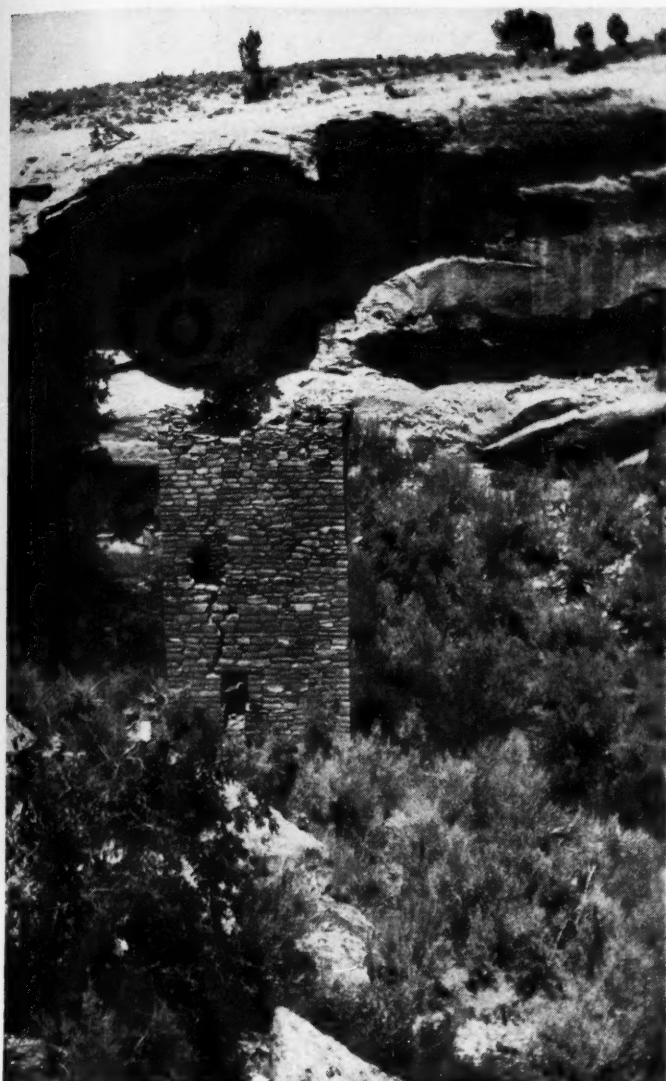
WELL KNOWN DESERT RAT IS FEATURED ON COVER

In the great desert Southwest there are both desert rats and river rats, and Art Greene, the subject of this month's cover on *Desert Magazine*, enjoys the distinction of belonging to both fraternities.

Art and his wife, Ethel, with members of their family, operate the Cliff Dwellers Lodge on U. S. Highway 89 at the base of the famous Vermillion Cliffs near the Colorado River's Navajo bridge. Associated with the Greenes are their daughters Ruth and Irene, and the latter's husbands Vern Baker and Earl Johnson. The Greenes' mail address is Cameron, Arizona.

In addition to operating the lodge, dining room and service station, the Green family conducts charter motorboat trips from Lee's Ferry up the Colorado River to Rainbow Bridge in the airplane propellor driven craft shown in the picture. It is a 3-day motorboat trip with a six-mile hike to the Bridge.

The name of the boat, *Tseh Na-ni-ah-go Atin*, is Navajo for "Trail to the Rock That Goes Over," meaning Rainbow Bridge.



One of the square stone towers in Hovenweep National Monument in Southeastern Utah. Why the towers were built in the depths of a canyon has perplexed explorers and scientists ever since they were first reported by Fathers Escalante and Dominguez in 1776. The most reasonable guess is that they were prehistoric astronomical observatories or temples for the worship of the sun.



Carefully shoveling away the dirt of centuries, archeologists uncover crude Stone Age walls at a site 15 miles northwest of Hovenweep. Note occasional overlapping courses—one brick supported by two. There is none of this at Mesa Verde, but it is well developed in Chaco Canyon, perhaps indicating the direction of the Hovenweep people's migration.

Ancient Towers of Mystery

A tower on a hilltop may be explained as a watchtower or a signal station—but a tower on the floor of a canyon is a mystery. John Stewart MacClary was one of the earliest visitors to Hovenweep National Monument, in the Four Corners region of Southeastern Utah. Here is the story of his explorations of the strange structures he found there, and his theories about the primitive tribe which built them.

By JOHN STEWART MacCLARY
Photographs by the author

"**T**HERE IS only one locality in the Union where four States come together at a common point. That locality is known as Four Corners, and the four States that adjoin are Colorado, Utah, New Mexico, and Arizona. It is situated in one of the most instructive areas, archeologi-

cally speaking, in the Union, for taking it as a center, a circle drawn from it 100 miles in diameter includes some of the largest and most attractive ruins of pre-Columbian United States. Four Corners is situated geographically nearest the heart of that area from which the pueblos sprang, the land of

the mythical *Sipapu*. The massive pueblos of Chaco Canyon, the Cliff dwellings of Mesa Verde and the mysterious habitations of Canyon de Tsay (Chelly) are within this region. The adjoining areas of southwestern Colorado and southeastern Utah are dotted with interesting relics of a people that has disappeared, and almost everywhere one turns are monumental indications of a pre-Columbian civilization antedating the advent of white men and reaching back to a time before documentary history began."

In 1923 these dramatic statements were published by the late Dr. Jesse

Walter Fewkes, famed American archaeologist and ethnologist. In that same year President Harding had set aside as Hovenweep National Monument an area of 286 acres. The greater part of this reservation lies in South-eastern Utah; the remainder is in southwestern Colorado. The land is waterless desert, but the ruins there preserved are unique.

Numerous towers, built on the floors of shallow canyons, stand there today as they have stood through uncounted centuries. Seeing them, one is immediately mystified: Who were the builders? What prehistoric emergency caused selection of these sites and this peculiar type of architecture? What became of the ancient stone-masons?

Construction was not limited to towers on the floors of canyons. Buildings which may have been watch-towers crowned a few commanding points. One large communal group is of a size which prompted Dr. Fewkes to name it Hovenweep Castle.

The ruins first were reported by Spanish New Mexicans. In 1776, while exploring a feasible route for a trail to connect Santa Fe with California, Fathers Escalante and Dominguez reported having seen the mysterious towers which even then lacked tenants. Evidently the padres spent no time investigating the structures, for only the briefest mention was accorded them in their diaries.

Later American settlers of the region were not so casual in the attention which they gave the ancient buildings. They wondered who the inhabitants had been and, prompted by curiosity rather than by scientific interest, they gathered every piece of pottery they could find. Dr. Fewkes found a sizable collection of sherds from Hovenweep in Dolores, Colorado. His trained eyes identified the ware as resembling that found in the Mesa Verde ruins—and he immediately wondered whether the inhabitants might possibly have been fugitives from whatever caused the desertion of those cliff dwellings.

The people of Hovenweep were skilled farmers, and remains of check dams and irrigation ditches are found near their cornfields. Small storage cists were built beneath projecting brows of cliffs. Too small to have served as dwellings, and lacking windows, these tiny rooms resemble those found at other ruins, where they contained large sealed jars filled with grain.

The number of dwellings at Hovenweep indicates a large population—perhaps more people than there are today in Utah's entire San Juan county.

Where did these people go? Archeologists suggest that, as the group grew in size, arable lands may have given out, and communities that depended on them were forced to migrate southward.

The name Hovenweep is an Indian term meaning "deserted valley." This might indicate Navajo, Ute or Paiute; all three groups include the expression in their language, and all three are familiar with the region. But none claims the Hovenweep people as ancestors.

Why should towers have been built by a people whose chief concerns evidently regarded agricultural problems? And why should such towers have been placed in deep canyon recesses?

Many answers have been offered to these questions. Since the Hovenweep people seem to have been chiefly interested in harvesting abundant—at least adequate—crops, it seems logical to me to suppose that most of the towers were erected as astronomical observatories, from which planting time was determined by priestly observation of sun, moon and stars. As in the bottom of a well, confusing glares from the horizon were shut out by the canyon and the walls of the tower, and it was possible to observe the heavens at all times of day. Or perhaps they were temples for the practice of sun worship.

During my explorations of Hovenweep, I was particularly interested in numerous ruins about 15 miles northwest of the Hovenweep group. Whether or not they were erected by the same wandering tribesmen has not been determined. The observatory type of tower is lacking, although numerous mounds have been found to contain foundations of towers. These watch-tower sites—if indeed that is what they were—are situated on elevated points. The terrain at this location also is higher. With more elevation to begin with, the ancient stonemason need not build his tower so high. For a people who had not learned the elementary principle of lapping the joints in courses of masonry—whose structural skill seemed limited to stacking piles of stones—this was an important advantage.

At the time of my first visit to Hovenweep, a field party from the Colorado Historical Society under Paul S. Martin—later to become Dr. Paul S. Martin of the Field Museum of Natural History in Chicago—had moved into this Hovenweep suburb for the purpose of excavating and studying its ruins. One kiva was cleared of earth to reveal several examples of lapped masonry. This might indicate a cultural change in the technique of

the builders. Or, it might have resulted from the addition of a more enlightened builder to the ranks of the Stone Age masons.

While Hovenweep Monument is open all year, it is most frequently visited between early May and late October. No ranger was present at the time of my first visit. The only guide I had was curiosity. A brochure has since been published, first in 1938, discussing the ruins and giving directions to the monument. I believe these are distributed by the Southwestern Monuments Association, Globe, Arizona.

The Four Corners is a lonely region, and roads into it are poor. If you are one who must depend on filling station or garage help in an emergency, you had better choose to visit the National Parks and Monuments where such services are lying in wait for the traveler—but not Hovenweep. With every mile you will feel more remote from your kind. Trees become scarcer and scraggier. The sunlight is an unrelieved glare. The wind is perpetual. It dries your skin and parches your lips. Your thirst increases. Dust covers you and sifts into your belongings. Progress is slow and jolting. You wonder if the vehicle will hold up; if you are really following the right road; if the ruins are still there at all. The mesa stretches flat and monotonous except for one weird mountain, the Sleeping Ute, along the Utah State line.

But if you do persist and advance; if you can ignore the absence of the hundred gadgets Americans call necessities; and if you can conjure with imagination until you make vivid to yourself the bands of human beings who knew no other world—go to Hovenweep.

Its piled stones from which the mud chinking has long since gone, will make you marvel. Its grouped rooms will suggest the tasks and crafts performed there. You will find yourself searching for objects that are relics of the old days. But few, if any, are to be found. Even the archeologists have moved to other and richer fields. Sun and wind alone continue to work upon the site.

Once communities of men, women and children lived and toiled, laughed and suffered in the light of the sun that shines over Hovenweep towers. Archeology can piece together enough of the fragments to trace general outlines of what the picture was. But when I stood on the mesa's rim looking upon the ruined houses and towers of the "deserted valley" archeology was forgotten and there was only an overwhelming sensation of emptiness, isolation and mystery.

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A portion of the field where red andesite carries seams and pockets of plume and moss agate. Fine specimens of gypsum satin spar were found in the white deposit on the left.

Field Day in Muggins Hills

When Guy Hazen found seams of plume agate in the andesite float at the base of the Muggins Mountains in Arizona, he did what any veteran prospector would do under the circumstances — he followed the float to its source. And that is how the agate field, mapped and described in the accompanying story, was discovered. This field trip for Desert readers goes into an area where there is much of interest for historian and archeologist as well as rock collector.

By RANDALL HENDERSON
Map by Norton Allen

IN 1937 Guy Hazen was roaming the desert Southwest as a field paleontologist for the American Museum of Natural History, seeking fossil deposits which would help the scientists piece together the story of prehistoric life on this earth.

Looking northwest from the little town of Wellton on Highway 80 in southern Arizona, Guy could see in the foothills of the Muggins Mountains

several miles away some white deposits which aroused his interest. White material in such a location as this could be the sedimentary deposit of an ancient lake or stream—and fossil bones frequently are found in such deposits.

Hazen drove his desert car across the dry bed of the Gila River and out into the hills for a closer examination. Just as he had suspected, the whitish outcrop was sediment of lake origin. A lake had existed here millions of years ago and eventually its dry bed had been up-tilted and broken by

Stone cabin erected in Muggins foothills by placer miners. The gold played out and the cabin has been abandoned. Klotho Temple in the left background.





Guy Hazen, paleontologist and prospector. His sharp eyes have found many fields of fossil and gem material in the Southwest.

those powerful forces which down through the ages have brought constant change to the crust of the earth.

Hazen found no fossils worth mentioning, but the trip into the Muggins foothills yielded some other discoveries which are of interest to rock collectors and archeologists.

One of the by-products of his excursion into the Muggins foothills was the discovery that a considerable area is underlaid with red andesite tuff and rhyolite containing stringers of agate—much of it gem material.

And so Hazen has been going back from time to time to bring out samples of golden, green plumé and moss

agate and sagenite and black and yellow geodes.

Hazen displayed some slabs of the agate from this field at Coachella Valley's gem and mineral show at Indio, California, in March this year, and invited some of the other exhibitors and myself to visit the field with him.

"There is more material in two square miles of that area than all the rockhounds in the Southwest will be able to take out in the next 100 years," Guy explained. "A few collectors have been going in there by car and airplane already, and since the material is so plentiful I am glad to share

my knowledge of this field with *Desert Magazine* readers."

The trip was arranged, and we left Indio early in the morning of March 17 in *Desert's* new jeep station wagon. At Winterhaven on the Colorado River we were joined by Hugh and Dorothy Proctor of Oasis, California, and Henry Beekly of Long Beach.

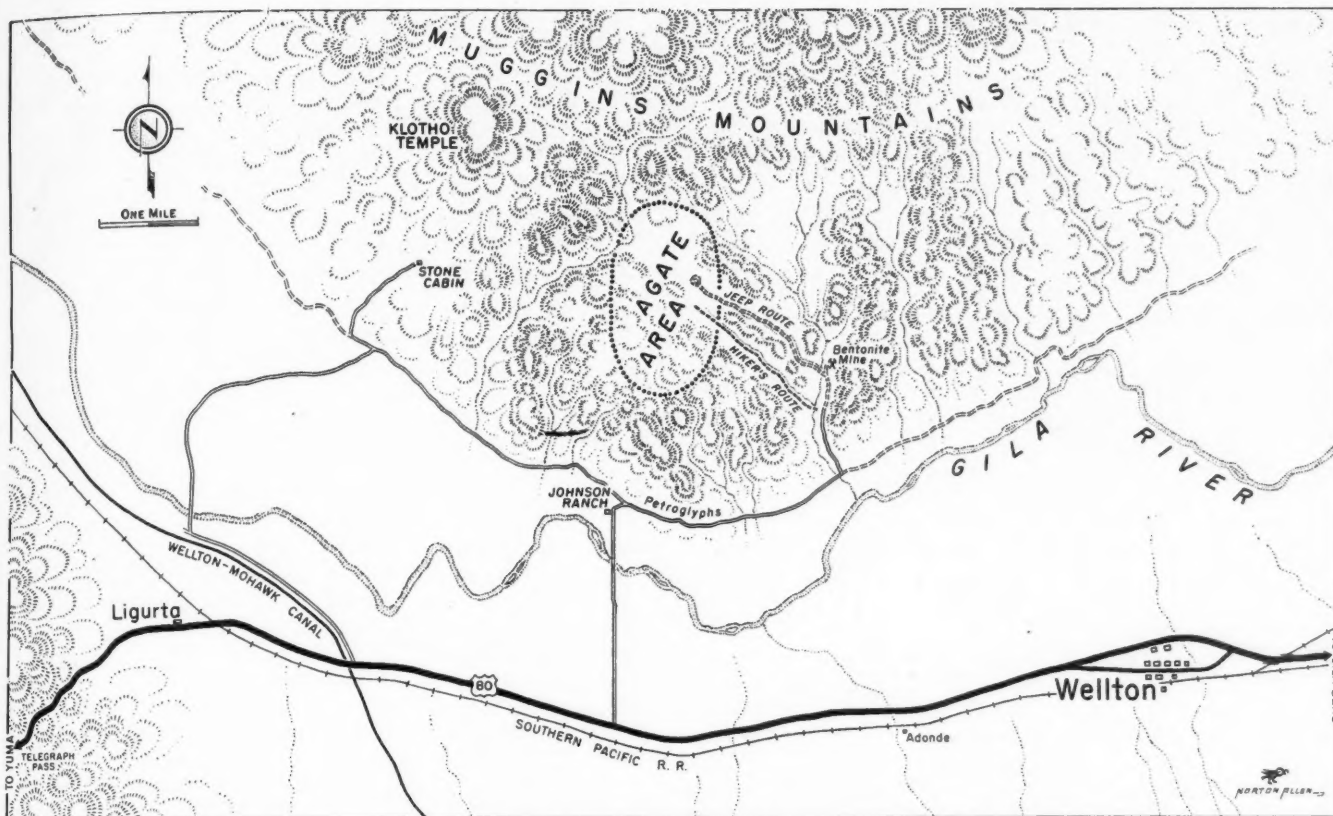
We crossed into Arizona and followed Highway 80 through Telegraph Pass in the Gila Mountains. This is the only place in the United States where Elephant trees of Sonoran origin may be seen from a paved highway—and I always scan the mountain-side to see how many of them I can identify as I go through the pass.

Just east of the Gila Range is the little service station settlement of Ligurta and four miles beyond Ligurta (approximately 5 miles west of Wellton) we turned left off the pavement on a dusty silt road that crosses the Gila River Valley. The U. S. Reclamation Bureau is now bringing Colorado River water to 75,000 acres in the Gila Valley, known as the Wellton-Mohawk project, and our road continued along the edge of lands being cleared and leveled for farming.

Our course was due north, and at three miles from the highway our road ended where the gravel banks of the Muggins foothills meet the silt soil of the Gila Valley floor. The spot is marked by a little cluster of trees and an abandoned shack—once known as the Johnson ranch. A pump was once installed near here to irrigate a large acreage of river bottom land. But the pump was long ago discarded, and the lands are now being brought back into use with Colorado River water for irrigation.

At the old Johnson ranch we turned to our right on a historic old trail that follows along the north side of the Gila. The Gila Valley has always been a natural route for east and west travel across southern Arizona, and this trail was used by the prehistoric Indians and more recently by successive caravans of white men—the padres of Father Kino's day, Juan Bautista de Anza and his colony of California settlers, the Mountain Men, Kearny's Army of the West, the Mormon battalion, the Butterfield stages and Mexican settlers bound for the West Coast.

Today, the Gila River below Coolidge dam is dry except where an occasional seepage spring moistens the ground for a short distance. But until the white man dammed the river in 1928 there was a little stream of water in the channel most of the year, and at times it swelled to flood proportions



when heavy rains occurred in the upper basin.

The trail we followed, at the toe of the Muggins foothills, has been used little in recent years, and it was rough and crooked. But it is still passable.

On the gravel ridges along the upper side of this old road are scores of boulders in which are incised the glyphs of ancient tribesmen—the Hohokam, perhaps, and the Pimas and Maricopas and Yumas. These petroglyph-covered boulders extend for

miles along this route. Lieut. William H. Emory whose record of Gen. Kearny's march provides a vivid picture of this trail as it appeared over 100 years ago, mentioned these glyphs and sketched some of them for the *Report of a Military Reconnaissance* which he prepared for the U. S. Senate after the historic trek of Kearny's Army of the West.

We continued along this old road about three miles and then turned left on one of the gravel tongues and

headed back into the foothills. At 1.3 miles from this junction we passed an old bentonite mine, now abandoned. From this point our guiding landmark was Klotho Temple, the most conspicuous peak in the Muggins range—twin peaks to be exact. We followed old jeep tracks across arroyos and along gravel ridges, always heading toward Klotho when we could see the twin peaks in the distance.

At about 2½ miles from the bentonite mine we came to a section cor-

This rock circle, similar to those found in many places in the Southwest, is a relic of prehistoric Indian occupation—but no one can say for certain what its use may have been.



ner which marks the extent of the agate field on the north. The iron survey post is at the corners of Sections 15, 16, 21 and 22 in Township 8 South, Range 19 West. The main agate field extends over Sections 16 and 21. It occurs in the arroyos as float and underlays much of the loose material on the hillsides.

The last three miles of the route we took to get into this field is strictly a jeep trail, but it is possible for agate collectors to hike into the field by a more direct route in less than half of that distance, from the point at which standard cars should be parked a half mile below the bentonite mine.

Two hours of daylight remained when we had selected our overnight campsite along an arroyo where there was an ample supply of dead ironwood, and we scouted a small sector of the field.

We found the arroyos strewn with boulders carrying stringers and pockets of agate. A hand-pick is necessary to break the boulders to discover the agate they contain. A small sledge would be even more effective, especially on the sidehills where agate bearing andesite is in place.

There are many shades and forms of agate here—plume in both golden and green, moss, picture and sagenite. Much of it, Guy Hazen told us, will fluoresce. At one place I found a camp where miners evidently had spent several days mining geodes in a loose gravel formation. But they had scarcely touched the potentialities of the field.

At one point where the light colored material of the ancient lake sediments was exposed, Henry Beekly took out some lovely specimens of white satin spar of gypsum. It has much the same texture as asbestos, and is a highly perishable form of material.

While the gypsum specimens were pretty, the field for the most part yields only cutting material. There are no nice cabinet specimens of agate scattered over the surface to be picked up by casual collectors. The agate is in a matrix that must be broken or sawed before the beauty of the gemstone is revealed.

There is little vegetation over the hills where the agate is located. A scattered growth of creosote bush and an occasional saguaro, ocotillo and encelia are all that have gained root on the hills. In the arroyos are ironwood and palo verde, with plenty of deadwood for campfires.

We saw much evidence of wild burros. In some instances their tracks were imprinted over the treadmarks of our own tires, indicating the close proximity of the animals. But we never

caught a glimpse of one of them. They are wary animals.

During the morning after our arrival we spent several hours exploring the field and gathering small sacks of material. But in that limited time we covered only a small part of the terrain where agate is found. Hazen, who over a period of years has covered the field thoroughly, told us that

over a ridge to the south he had found black geodes.

This is a mineral field where the casual rockhound who seeks only such pretty specimens as may be found lying on top of the ground will be disappointed. The agate occurs only in seams or in pockets in the adesite, and it is necessary to pack out about 10 pounds of matrix for every pound

Desert Quiz

Here's another lesson for those who are enrolled in *Desert Magazine's* School for Desert Rats. The tenderfoot may find some

of the questions rather difficult, but there is no penalty for making a mistake. And you'll know better next time. A score of 12 to 14 is fair, 15 to 17 is good, 18 or over is superior. The answers are on page 41.

- 1—An arrastre is—An old Spanish mill to grind corn..... A primitive weapon for killing rabbits..... A Spanish term for the measurement of land..... A device for grinding ore.....
- 2—According to legend the Lost Dutchman mine in Arizona is in—The Superstition Mountains..... Castle Dome Mountains..... Harquahala Mountains..... Catalina Mountains.....
- 3—If you owned a cinnabar mine with a mill for processing the ore you would ship your product to market in—Ingots..... Flasks..... Bags..... Bales.....
- 4—Traveling through Arizona on Highway 66 you would not pass through one of these towns—Flagstaff..... Wickenburg..... Holbrook..... Ashfork.....
- 5—Boyce Thompson Arboretum is located in—New Mexico..... California..... Utah..... Arizona.....
- 6—The Colorado River tributary which Powell named "The Dirty Devil" is now generally known as—Virgin River..... Fremont River..... Hassayampa River..... Verde River.....
- 7—"Mescal Pits" of the ancient tribesmen of Southern California were used for—Storing grain..... Roasting agave..... Ceremonial purposes..... Burying the dead.....
- 8—The pinnacle known as Weaver's Needle is associated with stories of—The Lost Pegleg gold..... Lost Breyfogle Mine..... Lost Dutchman Mine..... Lost Arch Mine.....
- 9—Sevier Lake is in—Utah..... New Mexico..... Arizona..... Nevada.....
- 10—The book *Death Valley in '49*, was written by—George Wharton James..... William Lewis Manly..... W. A. Chalfant..... J. Smeaton Chase.....
- 11—The blossom of the larrea or creosote bush is—Pink..... White..... Yellow..... Lavender.....
- 12—The Spanish spelling of Arizona's state flower is—Saguaro..... Sawhero..... Suguaro..... Saguero.....
- 13—The home of the Acoma Indians is in—Arizona..... Nevada..... Utah..... New Mexico.....
- 14—Most of the land in southern Arizona was acquired by the United States through—Conquest..... Treaty with the Apache Indians..... Gadsden Purchase..... Seizure by Kearny's Army of the West.....
- 15—One crosses the Algodones Sandhills while traveling in California on—Highway 99..... Highway 80..... Highway 60..... Highway 66.....
- 16—One of the following is a contemporary artist—Edwin Corle..... Barry Goldwater..... Clyde Forsythe..... Oren Arnold.....
- 17—Tahquitz is the name of one of the gods of the—Yuma Indians..... Mojave Indians..... Cahuilla Indians..... Cocopah Indians.....
- 18—The Escalante River is a tributary of the—Great Salt Lake..... Gila River..... San Pedro River..... Colorado River.....
- 19—Davis Dam in the Colorado River was named in honor of a former—Nevada senator..... Director of the Reclamation Bureau..... Secretary of Interior..... Governor of Arizona.....
- 20—Indians of San Ildefonso pueblo in New Mexico are best known for their — Pottery..... Beadwork..... Rug weaving..... Silver-smithing.....

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of agate that is recovered. The material will have little beauty until it is slabbed and polished. However, there is a wide range of material in this field and for the collector who has his own lapidary equipment, it offers the opportunity to acquire some exceptionally fine gem rock.

Leaving the field the next afternoon we stopped along the old Gila Valley road to take pictures of some of the petroglyphs which are so plentiful on the gravel mesas. I saw several of the stone circles which are rather common in the Southwest—rock rings evidently put there long ago by Indians. These circles—in this instance about eight feet in diameter—may have been the foundations of wickiup huts, or they may have been put there for ceremonial purposes. The archeologists have never given a conclusive answer to this question.

For many years I have wanted to climb the imposing rock tower in the Muggins Mountains marked on the maps as Klotho Temple or Klotho Peak. I believe this also is the pinnacle marked on some maps as Coronation Peak because of the fancied resemblance to a crown.

Guy Hazen offered to show me a route to the base of the mountain—and since I may go back there some day and attempt to go to the summit, we took time out to follow an old prospector's road which ends at an unoccupied rock cabin within three-quarters of a mile of the base. Klotho is not high. Will C. Barnes in *Arizona Place Names*, now out of print, lists it at 1422 feet. Its sidewalls are very precipitous, but I am confident a route can be found to the top.

Norton Allen's map, accompanying this article, shows the roads we followed going into the agate field in March this year. But the roads across Gila Valley are changing from month to month, due to the vast program of land development now taking place there. Where the trails once wound through mesquite and willow on the floor of the valley, bulldozers are now blocking the area out in rectangular farms, with road rights-of-way only along section and quarter section lines.

But the agate in Muggins foothills is not hard to find. It covers a huge area, and the old reliable method used by miners for hundreds of years—find the float and follow it to its source—eventually will lead any rockhound into the heart of the field.

These boulders, incised with the glyphs of prehistoric tribesmen, are found along the base of the Muggins foothills for many miles. The meaning of these symbols is not known.



LIFE ON THE DESERT

By CARITA SELVAS

AS A CHILD I lived for a short time at Daggett, a little railroad and mining center on the Mojave desert. From Daggett were shipped, by the Santa Fe railroad, all the vast mineral riches of the nearby Calico Mountains and Death Valley. It was then miles from civilization.

Barstow, then a tiny railroad junction, was about nine miles west. Two or three miles east was the station, section house, and railroad water tank of Newberry. The roaring mining camp of Calico lay a few miles to the north. This was our world—a happy, contented world, though a strange one.

The sights I was wont to behold at Daggett never lost interest to me. There were huge mines and rough miners, and great roaring silver stamp mills, where the ore was crushed and made into bullion for shipment. There were the 20-mule team borax wagons and their trailers, driven with a single jerk line by extremely rough and ready teamsters. And there were heavily laden pack trains of little mouse colored, long-eared burros to excite my wonder. Many of these half wild little creatures wandered freely about the town. They had been set free by their former owners who had deserted this dry country. Happy the child who was able to corral one for a slow, and usually short ride! Never shall I forget the rude awakening I had and the stars I saw when I tried to ride one. He objected!

But best of all, were the fine people, kind hearts, and sincere friendships to be found at Daggett.

On the other side of the tracks was the business section—grocery stores, many saloons, and a dance hall open all night. There, too, was all the vice which usually went with a wide open western town. Out the far corner of my eye I often caught glimpses of painted, flashily dressed women, who seemed apart from the desert town. But my straight-laced New England mother, not long from her Boston home, always hurried me on with averted eyes.

Among all these strange new sights, nothing filled me with greater wonder than the bands of Mojave Indians who roamed at will over the desert. Their home was on the Fort Mojave Indian reservation, just over the border in Arizona. I never failed to welcome the arrival of these strange roving people—unusually tall handsome men, with long black hair and flashing eyes, and their fat, squatty women with

their painted and tattooed faces, and the little greasy, beady-eyed papooses strapped upon their backs. The young Mojave girls were quite trim and pretty but, when older, they grew fat and unkempt.

Although I had been taught both to fear their anger and respect the rights of the Mojaves, I liked to observe them from a safe distance. They were so unconscious of their surroundings, so delightfully unconventional in dress and manner. They bore themselves with such a proudly superior air that the little town looked upon them with mingled respect and fear.

The Mojaves enjoyed almost unlimited freedom among us. No one dared to tamper with them or excite their revengeful anger. One look from those fiery, eagle eyes was enough to overawe one of only ordinary courage. Even the Santa Fe Railroad officials, fearing their treachery, made friends of these "children of the desert" by allowing them to ride free at their own sweet will on top of, or inside the empty freight cars. And they were not slow about using this privilege, but kept up an almost constant journeying back and forth between the little desert towns scattered along the railroad. Sometimes, when the mesquite beans were plentiful there, they camped in the dry river bed near Daggett for weeks at a time, building rude shelters of brush and sticks.

My family lived in a large comfortable old adobe house, with a wide veranda along its two sides. It was bordered by a row of tall shiny green cottonwood trees. These were kept alive in summer by a stream of water from the faucet.

This cozy desert home had been built by an old time saloon keeper who had grown affluent, and had sought fairer fields of endeavor. It was located on the right side of the tracks, for the railroad ran through the middle of the town, with a very wide sandy street on either side. Its former owner had surrounded the place with a tight foundation, topped with a high white picket fence. This was to keep out rattlesnakes and sidewinders, we were told. This information did not add much to my tenderfoot mother's comfort, and occasionally these unwanted visitors did slither across our yard. We children were taught to be on guard against them, as well as against scorpions, centipedes and tarantulas.

This is another of the winning manuscripts in Desert Magazine's 1952 Life-on-the-Desert contest. Winners of the 1953 contest which closed May 1 will be announced in a future issue.

One exceedingly hot day—hot even for the desert—we were trying to maintain some slight degree of comfort by means of fans and cooling drinks. Suddenly we heard the rumble of an approaching train and soon after, the well known cry, "The Mojaves are coming!"

Yes, the Mojaves certainly were coming! In the clear desert distance we could discern the slow moving freight train, far up the track toward Newberry. On top of the cars, swarming like insects, were the gaudy red and yellow decked forms of the Mojave women and the tall, dark ones of their men.

Accustomed as was every dweller in the desert to such sights, we nevertheless watched with great interest while the train drew up at the station and the crowds of strange dark people descended from their lofty perch. True to their Indian nature, they uttered never a word, but deposited their gaudy blanket rolls, their only encumbrance, upon the sand near the tracks and there, under that broiling midday sun, evidently wearied by their long journey, one after another dropped off into heavy sleep.

But to one fat, wrinkled old squaw this hard couch on the hot sand was evidently distasteful. After trying vainly to make herself comfortable with the rest, she gathered up a dirty old sack and, without further ado, crossed the street, deliberately opened our latched front gate, and walked in.

Mother watched her approach from behind the locked screen door with some uneasiness, for she judged, from past experience, that she would ask for, or help herself, to anything she might fancy, from an ice cold drink to our best Sunday bonnets.

But it was soon evident that this woman wanted only a quiet nap. She marched straight up the steps to the shady veranda and, depositing her dirty sack before the front door without so much as "by your leave," threw herself down upon it and went to sleep. There she lay, obstructing the doorway for hours, while no one dared to disturb her slumber.

At last we were led by a mighty grunt to believe that she had awakened, and the belief was soon confirmed when a dishevelled form appeared before the locked screen and a dirty hand shook it until it trembled on its hinges.

"Ugh," she grunted, "heap hot, you get dinner?"

"No," mother answered politely, but fearfully, taking courage from the locked screen. "No dinner today. You go now? Goodbye."

And then, such a look of rage and disgust crossed that squaw's face. Doubling up her grimy fist, she shook it before our faces, and muttered ominously, while her wild black eyes never left ours.

"White squaw, no good. Kill white squaw—burn house!" And giving the door a parting kick, she took up her bed and departed, all the while threatening us with her angry eyes and muttering curses.

As if this were not enough excitement for one day, that night there appeared on the scene, we knew not from whence, a character who, I believe has long since disappeared from western life—a grizzled itinerant leading his dancing bear. All the populace, including the visiting Mojaves, gathered in the wide moonlit street to watch the bear perform.

The master holding the chain, which was fastened to the animal's steel muzzle, brought him slowly up on his hind legs. Then to his master's rhythmic chanting, "De, da, de,—de, da, de,—de, da, de, de," the great bear cavorted about in a clumsy sort of dance.

The Mojave braves holding the center of the stage with the bear and his master, burst into shouts of delighted laughter. One huge young Indian seized another by his long black hair and pulled him about in laughable imitation of the dancing bear, meanwhile chanting "de, da, de,—de, da, de,—de, da, de, de." This was the first indication of Mojave humor that any of us had ever seen, and it was really funny.

Next day, the Mojaves still lingered in Daggett. Mother, still a little fearful, insisted that we children stay close at home. She was trying to amuse us by reading a story, when suddenly the great black faces of two Mojave men were pressed close against the window pane. Hands shading their eyes, they calmly surveyed the interior of our big living room. Out of sheer fright and nervousness, I began to giggle.

"Don't laugh. Don't notice them," warned mother in an undertone. But the hand that held her book trembled.

After a few minutes, which seemed hours, evidently having seen all they cared to see of the white man's civilization, they passed on toward their desert camp. But on the way out they nonchalantly helped themselves to our cherished pets — four adorable, little fat puppies, which we had placed in a box, with their mother, on the cool side of the house.

This was too much! When we children discovered our cataclysmic loss, we set up a loud wailing. Even mother, inclined to temporize with all Indians, was roused to action. She notified the town constable and with a small posse he rode out to the Indian camp and recovered our pets.

We were told by an old desert rat that the Mojaves undoubtedly had in-

tended to cook and eat our puppies. But we never really knew whether it was hunger, or malicious mischief, which, in return for our inhospitality prompted them. After a few days the whole band left town and we never again saw our uninvited guests. But we took warning from these experiences and never again so rudely refused the request of a Mojave Indian.

Below-Normal Flows Expected For Colorado River, Tributaries

An erratic pattern of precipitation was recorded over the Colorado River Basin in March, with percentage values ranging from 50 percent to 164 percent of normal. Average precipitation, according to water supply forecasts of the U. S. Weather Bureau and Soil Conservation Service, was only 67 percent of normal, and the overall water picture remains unfavorable.

The picture is brighter—but still not good—for the Salt and upper Gila River basins, which experienced above-normal precipitation for the first month since November. Precipitation for March averaged 200 percent of normal and brought some relief to the area. Precipitation amounts of slightly above normal were reported for the upper Little Colorado River and for the Tonto Creek basins. Over the Verde River and the lower Little Colorado all precipitation totals for the month were below normal.

Reports from the various watersheds are as follows:

Colorado River above Cisco — Although some increases are noted in the current forecasts, the outlook for this portion of the basin still is not favorable. Median forecasts for the main stream and its tributaries above Cameo and for the upper Gunnison River Basin call for 62 to 84 percent of the 10-year average run-off, less than any one season since 1940. The outlook for the Dolores and Uncompahgre River basins is even less promising. Current forecasts for these streams call for streamflows of approximately half of the 10-year average.

Green River Basin—Forecasts for streams in Utah are lower than those issued March 1. The current water-supply outlook is for run-off of 77 percent of average for Huntington Creek and Price River, and flows of only 55 percent of the norm are expected for the Duchesne River at Myton.

San Juan River Basin — Below-normal March precipitation necessi-

tated slight downward revisions in forecasts issued April 1. Current forecasts for the basin call for flows ranging from 45 percent of average for the San Juan near Bluff, Utah, to 60 percent of average for the Los Pinos near Bayfield, Colorado.

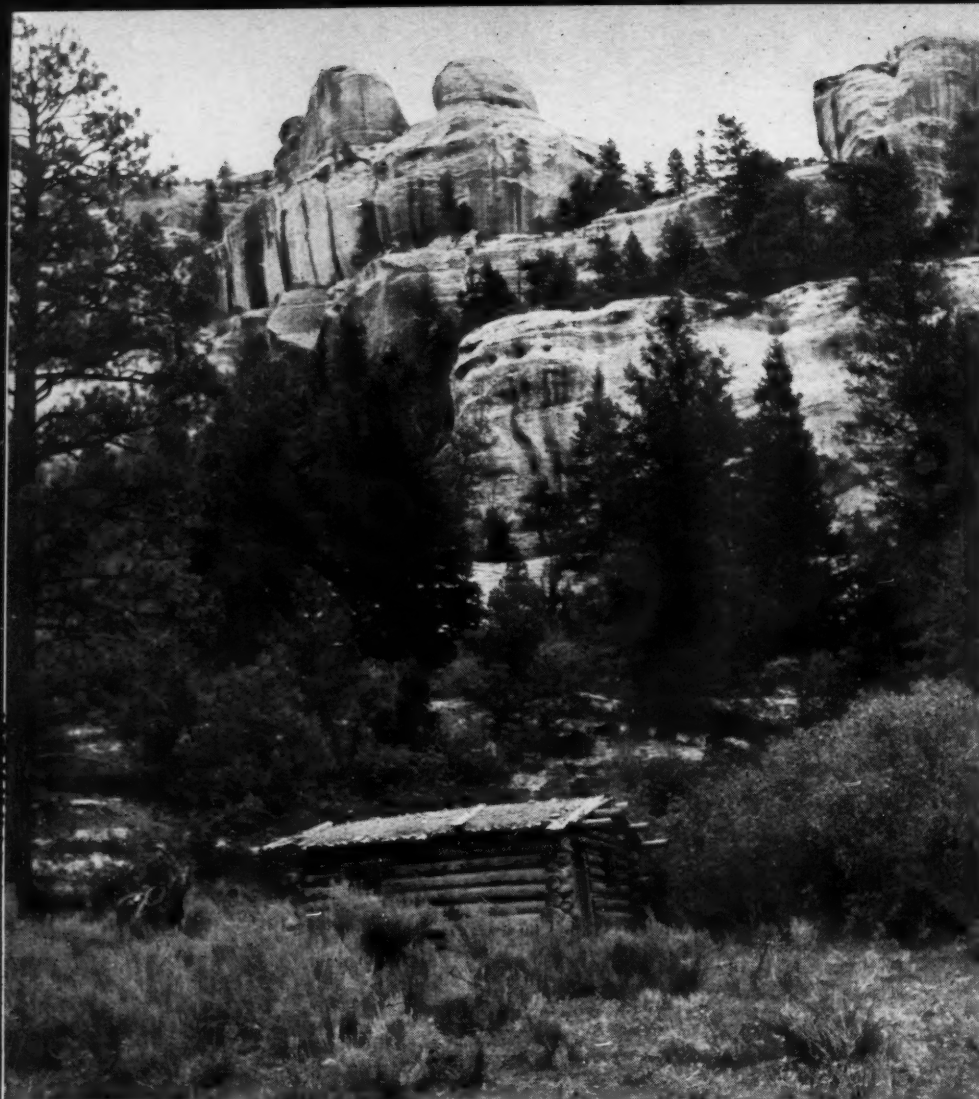
Little Colorado River Basin—March precipitation over the Little Colorado River Basin was not sufficient to improve the poor water-supply outlook for the basin. November-June run-off for the Little Colorado at Woodruff is still expected to be only 30 percent of average.

Gila River Basin — Although the heavy March precipitation over the upper Gila and Salt River basins was effective in increasing this month's forecasts by 8 to 13 percent over those of the month previous, the outlook for these basins is still not good. The November-June flow of the Gila River at Solomon is forecast to be only 37 percent of the 10-year average. Somewhat more promising are predictions for the Salt River and Tonto Creek near Roosevelt; nearly 60 percent of average run-off is in prospect for these two streams. The forecast for the Verde River is little changed from the March 1 report; 4 percent of average flow is expected if precipitation for the rest of the season is near normal.

The one bright feature of the outlook for the Salt and Verde basins is the high carry-over of storage in the Salt-Verde reservoir system. As of March 15 stored water in San Carlos Reservoir was approximately 150 percent of normal. On the other hand, the March 15 stored water in San Carlos Reservoir was only seven percent of normal.

• • •

Elsewhere in the Southwest, water supply forecasts were as discouraging as in the Colorado Basin. Snow run-off was below normal almost everywhere, and low in water content. Again, large reservoir supplies were one bright spot in an otherwise gloomy water picture.



HOMESTEAD Ten Years After

By R. WAYNE CHATTERTON
Caldwell, Idaho

This place has been ordained to desolation,
And I have watched it year by year.
These man-made works are doomed to desecration,

For all alone, so bare and sear,
They fall, expire, become a barrenness.
When I first came, these hills wore desert dress,
Which fence and cabin could not dispossess.
So now the sand, with grim determination,
Creeps back on all that I constructed here.

The structures rot away with mold formation,
A wistful end, a false career.
Here age and dust will be the termination,
While nature gives to death a bier
Of stone and sage and endless emptiness.
I should have known when I first came,
unless,
Perhaps, the desert had with guilefulness
Contrived to hide its great determination,
And its intent to conquer all that's here!

BEYOND THE ROAD

By CONSTANCE WALKER
Los Angeles, California

Green chaparral beyond the road
Surrounds a quiet place
Where mesquite shelter has bestowed
A sanctuary—grace.

Wind-rippled sand leads in an aisle
To candled Yucca plant—
And there is peace on earth awhile
Where winging choirs chant.

DESERT STREAM

By MYRTLE A. KRAUSE
Glendale, California

Just a never ending trickle,
Now you see it, now it's gone,
Desert waters are so fickle,
Uncertainly they move along.

Far in the hills, down through canyons gleaming
The streamlets form like silver strands;
When they reach the place with the heat waves teeming
They hide unseen beneath the sands.

When clouds obscure the distant mountains,
And rain pours down from troubled skies;
These little streams become like fountains
And rushing torrents quickly rise.

Oneness

By TANYA SOUTH

There is a bond between each one
With all the rest,
However each has lived, or done
His worst or best.

And be he calm, or full of strife,
In faith or doubt,
He'll still be *one* with all of life,
Within and out.

Inner Fire

By ELLA LOUISE HEATLY
Long Beach, California

A lonely cabin hugs the hill,
Half hidden in a fringe of firs;
Rough hewn, square-built and obdurate,
Defying winter's icy spurs.
Within, a man—his book, his pipe,
And near his chair a sleeping dog;
Lamp shadows flicker merrily,
Sparks burst from brightly burning log.

The man? He, too, is rugged, gnarled,
Deep lines crisscross his leathered face,
His thinning hair is streaked with white—
Time's ruthless hand has left its trace!
Vicissitudes and joys are met
By stoic silence on his part;
Without, a calm severity;
Within, a warmly glowing heart.

O man and cabin, king and throne,
Remain steadfast, through time and weather!
Your outward scars hide inner grace;
Stand firm! Share destiny together!

ITINERANTS

By GRACE BARKER WILSON
Kirtland, New Mexico

Storms are itinerants, following the wind-ways,
Over the mesas and down deep ravines;
Constantly moving, and changing forever,
And flickering across the gray desert screens.

ROAD LURE

By GRACE STILLMAN MINCK
Anacortes, Washington

The little old road says, "Come, I know
Where pine trees greet the dawn;
Where, over polished rocks, the flow
Of mountain streams runs on—"
But all I answer is, "On your way!
I have work to do today."

Then the little old road smiles in the sun,
Replies, "O.K., but I will wind
Over desert sands and often run
Horizon distances, and find
Where sunsets heap their surplus gold;
Where stars are rarest gems and—" "Hold!"
I cry, rebellious, "take my hand—
Show me this world of desertland."

DESERT GRATITUDE

By RACHAEL DUNAVEN YOCOM
New York City, New York

When I first saw the desolate terrain,
The bleak, unending vistas of the sage,
My heart grew sick with longing for the rain,
To quench the thirst of this dry foliage.
I looked again and could not but admire,
The sturdiness with which the heat was faced;
And marveled at its courage to aspire,
This grim, forbidding, barren land to grace.
And as I rode o'er rolling hills, I'd see,
Green valleys nestling at their feet, and then—
I knew each blade of grass, each lovely tree,
Stood as a living monument to men.

Each spring the desert's gratitude is shown,
In color, saying: "Carry on! You're not alone!"

Pictures of the Month

Playmates . . .

Suspecting mischief, the little white kid sniffs his Navajo playmate's hand for a hidden treat. The Indian youngsters and their pet were photographed at Kayenta, at the entrance to Monument Valley, by Dr. J. Robert Lindsay of Ganado, Arizona. Dr. Lindsay used a Busch Pressman camera, Super XX film, Wallensak Raptar lens, 1/100 second at f. 16 for the photograph, first prize-winner in Desert's April contest.

Hopi Kiwa . . .

Second prize for April went to Hetty Cooper of Flagstaff, Arizona, who took this picture at the Hopi mesa village of Mishongovi in Northern Arizona. The ladder in the foreground leads down into a sacred underground ceremonial room, the kiwa. Mrs. Cooper used a Rolleiflex camera, K2 filter, Super XX film, 1/100 second at f. 16.



COUNTY MAPS

Many New Issues

Utmost details—for offices, realtors, Lumbermen, sportsmen, Miners, etc. With Townships, rang, Sec. Mines, all roads, trails, strms. R.R., Elevations, Ntl. Frsts. etc.

Alameda	20x30	\$1.00
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Calaveras	21x31	1.00
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Plumas	27x22	1.00
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San Bernardino, No. 1/2 or So. 1/2		7.50
San Bernardino—N.W. 1/4		3.75
San Bernardino—S.W. 1/4		3.75
San Bernardino—N.E. 1/4		3.75
San Bernardino—S.E. 1/4		3.75
San Diego	38x49	2.50
San Diego	26x34	1.00
San Francisco	36x40	1.00
San Joaquin	22x34	1.00
San Luis Obispo	35x56	3.00
San Luis Obispo	38x24	1.00
San Mateo	20x32	1.00
Santa Barbara	36x38	1.50
Santa Barbara	33x23	1.00
Santa Clara	25x33	1.00
Santa Cruz	19x24	1.00
Shasta	34x49	3.00
Shasta	33x24	1.00
Sierra	16x31	1.00
Siskiyou	39x62	4.00
Siskiyou	26x43	2.00
Siskiyou	20x32	1.00
Solano	22x25	1.00
Sonoma	29x36	1.00
Stanislaus	34x36	1.00
Sutter	21x24	1.00
Tehama	26x48	2.00
Tehama	17x32	1.00
Trinity	33x52	3.00
Trinity	23x34	1.00
Tulare	38x49	2.00
Tuolumne	31x43	1.50
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Most maps are drawn to scale of 1/2 inch to the mile. Maps obtainable flat or folded.

WORLD'S MINERALS

2417 San Pablo Ave., Oakland 12, Calif.

"EVERYTHING FOR THE HIKER"

**SLEEPING BAGS
AIR MATTRESSES
SMALL TENTS**

and many other items

VAN DEGRIFT'S HIKE HUT

717 West Seventh Street
LOS ANGELES 14, CALIFORNIA

Hard Rock Shorty

of Death Valley



By L. C. DeSelm

Hard Rock Shorty was dozing on the bench under the lean-to porch in front of the Inferno store when a bus loaded with Easter vacation tourists stopped for cold drinks.

Obviously it was a group of school youngsters being conducted on a tour of Death Valley by a man and his wife who presumably were teachers. While the bus was being serviced the group sought the shade of the building, and the conversation turned to packrats.

"They are little desert rodents," one of the teachers was explaining. "They live near the camps of prospectors where there are crumbs of food to be found. Generally they do their foraging at night, and when they take an

object from the camp they always put something in its place.

"Isn't that true, Mr. Hard Rock?" the teacher turned to Shorty for confirmation.

"Yep, an' they're smart little rascals, too," was Shorty's answer. "Out here on the desert we call 'em trade rats, an' they're smart traders, too. They generally git the best o' the deal.

"Remember one winter up on Eight Ball crick when I wuz helping Pigsaw Bill do the assessment work on his gold mine. One night one o' them little beggars lugged in a sample o' lead ore an' left it in place of Bill's watch.

"Bill'd no way o' keepin' time after that, so me 'an him jest worked frum sunup to sundown. Wuz three months later when that pack rat got tired o' the watch an' brought it back one night and lugged off a poke o' gold nuggets Bill'd been savin' fer two years.

"An that watch wuz still a runnin'. The little rascal had kept it wound up. Only the watch wuz an hour slow. But yu can't blame the packrat fer that. It didn't know nothing about this daylight savin'."

Prizes for Unusual Pictures

Probably no region on earth offers as favorable conditions for taking pictures, or as wide a range of subjects, as the desert Southwest. Two essentials for good black and white outdoor pictures are sunlight and shadows—and the desert has a generous quota of both of them. In order to secure the best of the photos of desert subjects, Desert Magazine each month offers cash prizes in its Picture-of-the-Month contest. Subjects must be essentially of the desert, and of course the more unusual the subject the better the chance for prizes.

Entries for the June contest must be in the Desert Magazine office, Palm Desert, California, by June 20, and the winning prints will appear in the August issue. Pictures which arrive too late for one contest are held over for the next month. First prize is \$10; second prize \$5.00. For non-winning pictures accepted for publication \$3.00 each will be paid.

1—Prints for monthly contests must be black and white, 5x7 or larger, printed on glossy paper.

2—Each photograph submitted should be fully labeled as to subject, time and place. Also technical data: camera, shutter speed, hour of day, etc.

3—PRINTS WILL BE RETURNED WHEN RETURN POSTAGE IS ENCLOSED.

4—All entries must be in the Desert Magazine office by the 20th of the contest month.

5—Contests are open to both amateur and professional photographers. Desert Magazine requires first publication rights only of prize winning pictures.

6—Time and place of photograph are immaterial, except that it must be from the desert Southwest.

7—Judges will be selected from Desert's editorial staff, and awards will be made immediately after the close of the contest each month.

Address All Entries to Photo Editor

The Desert Magazine

PALM DESERT, CALIFORNIA

Lost Lode of Sierra Sombreira

According to the author, this story in substance was told by the widow of the man who found the tungsten mine—a woman who is still living in southern Arizona. In order to save her from undue annoyance from lost mine hunters, her name and that of her husband have been changed. She still has the map—but is unwilling to make it public because "some of Cap's friends are still looking for that mine."

By KENNETH E. HICKOK
Map by Margaret Gerke

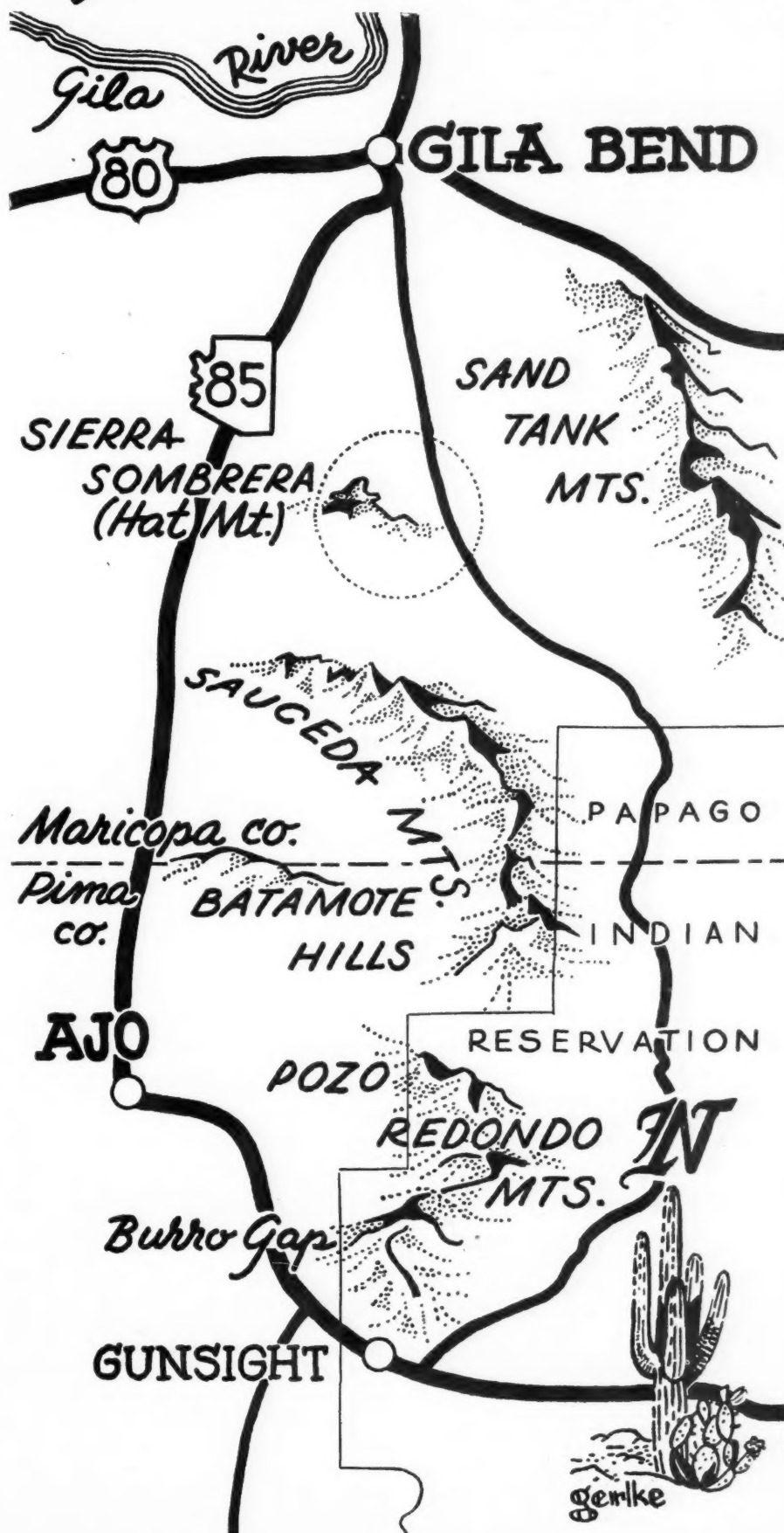
AT THE time of World War I, Cap Linger was a handsome, young fellow. He did not fit the popular conception of the Old Prospector. He had no long straggly beard, and he did his traveling by Model T Ford, rather than by burro. However, a mine accident had left him with a slight limp and the army said "no" when he tried to enlist. So, he was doing his bit by holding down a job in the big copper mine at Ajo, Arizona.

A few years previous, the New Cornelia Company had extensively prospected the Ajo area and after consolidating all the small mines into one group, had started production. Before the consolidation Ajo had been a sleepy little village, but now it was a booming camp. The name Ajo was derived from the wild garlic, which grew in the valley near the mines.

Cap Linger was as patriotic as anybody but he loved to prospect. Sometimes he would follow a stringer and forget to report back to the mine in time to go to work on his shift. This habit led to some heated debates, with the mine boss doing the talking and Cap listening. These one-sided debates in no wise lessened Cap's love of prospecting, nor did they change his habits for more than a day or two.

Tungsten is one of the most important hardening agents used in making steel. In wartime it is essential, hence of great value. At one time its scarcity caused buyers to quote it at so many dollars per pound. Of all the metals, Cap considered tungsten to be king, so he was really prospecting for the ores of this vital metal. He would not have scoffed at a vein of copper or lead, especially if they carried high values in gold or silver, but primarily he was after tungsten.

He was aware that the hills adjacent to Ajo had been almost continuously



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prospected, from the time of the early Spanish explorers. So, he concluded that the Pozo Redondo Range east of town offered a much better field or at least one that had not been so thoroughly combed.

A good place to start, Cap figured, was at Burro Gap about eight miles east of town and several miles north of the old Gunsight Mine. From Burro Gap he could prospect north to the Gila River without getting into crowded territory. Crowded territory was a region where you might see one human a week. The fact that the one human probably was a cowboy, in no manner lessened the crowding.

Every time he could wangle a day off Cap would head for the Pozo Redondos. Slowly he worked northward. In spite of his persistence he found no values worth locating.

After months of prospecting Cap had worked north from the Pozo Redondos into the Saucedo Range. On the map they are two separate and distinct ranges. On the ground the demarcation is anything but distinct, and is further scrambled by the encroachment of the Batamote Hills. Cap was now driving his Model T halfway to Gila Bend before turning off the main road directly west of Sierra Sombrera.

Sierra Sombrera now commonly and familiarly known as Hat Mountain, is a hat shaped promontory halfway between Gila Bend and Ajo. It stands six miles east of the present black-top highway, and the present highway follows the old wagon road between the two towns. Its summit is high above the surrounding hills and its appearance is so distinctive that it can be seen and recognized for miles in all directions.

The farther Cap's prospecting took him from Ajo, the more flexible became his working hours in the company mine. He was constantly embroiled with his boss and only the shortage of miners kept him from being fired.

After many days prospecting in the vicinity of Sierra Sombrera, Cap returned one day much earlier than usual. He confided to his wife that he had struck it rich. All that remained was to enlist the aid of a small amount of capital to build a road and get a little mining machinery. Then they would be producing tungsten ore which would strengthen the sinews of war and at the same time furnish a profit that would make them rich.

Cap showed his wife a handful of rocks. They were not unusual as far as she could tell, but they were very heavy. He said it was highgrade tungsten ore. He described the strike in

great detail and drew her a map showing the exact location, so she could find it if anything should happen to him.

Cap's wife knew nothing of the terrain around Sierra Sombrera, so to her the map was just a jumble of lines. Further, she knew nothing of mines or mining, so the minute description of the lode and its surroundings meant nothing to her. But, being a dutiful wife she tried to show an interest in what Cap was saying, and he thought she understood everything.

It was only a short time after Cap made his strike that the war in Europe ended in an Armistice. With the cessation of hostilities came a drop in the price of metals. Mine payrolls were drastically cut. One of the first to go was Cap. His frequent absences had made his job insecure, and the boss was glad to get his name off the payroll.

For several years Cap and his wife drifted from mining camp to camp, wherever a job offered. They had no capital to develop the tungsten mine. Their problem was to earn food and lodging from day to day.

Finally they drifted back East where Cap's wife had grown up. During the cold damp winter Cap caught pneumonia and died.

His wife in going over Cap's effects, found a handful of carefully wrapped rocks. The rocks appeared very common but they were heavy. As a sentimental gesture she included the rocks in her baggage and rejoined her mother in Ajo.

A few years later another World War had set civilization aflame. With the war came skyrocketing metal prices. One day while looking through an old trunk Cap's wife ran across the carefully wrapped rocks. She took them to one of Cap's friends to see if they showed any values.

They did—highgrade tungsten!

More searching turned up the map Cap had drawn. Armed with the map, Cap's friends set out to find the rich tungsten lode. They were gone several days and finally were picked up on the highway south of Gila Bend, miles northwest of Sierra Sombrera, the supposed area of the lode. They had become lost in the tangle of canyons.

Since that time many people, with and without benefit of the map, on foot, in jeeps, and in airplanes, have sought the Lost Tungsten Lode of Sierra Sombrera, but to this day its exact location remains unknown.

From what Cap told his wife, the lode is big enough and rich enough to make the finder immensely wealthy. But where is the lost lode?

Letters

And He Can't Run Away . . .

San Diego, California

Desert:

Another desert dweller, besides the wild burro, who needs protection is *Testudo Gopherus* — the desert tortoise. The law affords this harmless little reptile absolutely no practical protection, and nothing at present stands in the way of its ultimate destruction.

Driving from Las Vegas to Baker about 15 years ago we encountered a number of these little creatures after a desert shower. Two were purchased from a truck driver who was taking them to friends as "souvenirs." We carried them well off into the desert and set them free. Several times we stopped the car to rescue the slow moving things from the busy highway, freeing them well away from danger of spinning wheels and souvenir hunters.

I discovered to my dismay that *Testudo Gopherus* had been overlooked in earlier and successful efforts to protect desert flora and fauna. Back home in San Diego I contacted our Senator Ed Fletcher, Assemblymen Charles Stream and Paul Richie. I also enlisted the cooperation of Clinton G. Abbott, then curator of San Diego Natural History Museum. These gentlemen all agreed that the desert tortoise should be protected, and they assured us that the necessary statute would be enacted in the next legislative session.

The law as passed and given to the Fish and Game Commission to enforce contains 11 words: "It shall be unlawful to sell or purchase any desert tortoise."

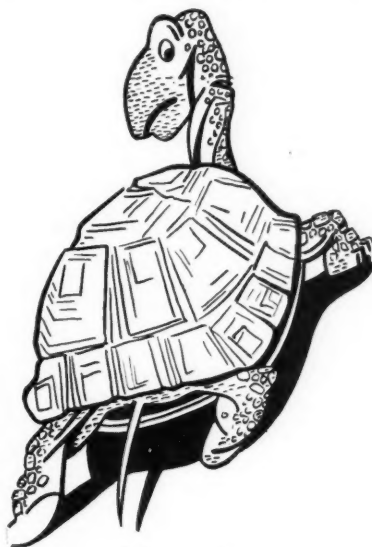
This ridiculous law, when first announced, had a few good effects. One San Diego man, upon hearing the tortoise was to be protected, voluntarily turned over to the zoo a number of tortoises he had kept as pets in his back yard. But such negative means no longer can be relied upon if an interesting and curious desert dweller is to escape oblivion. The inadequate law in no way forbids possession, molestation or transportation from its desert habitat; these are key protective words in any statute honestly designed to safeguard natural wildlife.

Within the past 18 months I have traveled more than 2000 miles through the desert by car without seeing a single desert tortoise. A year ago my

brother and I explored much of the old Dale area east of Twentynine Palms on foot and did not see a living tortoise. Twenty years ago Jack Meek, a prospector in the Dale district, told me they were quite plentiful out his way. What has become of them?

Unlike some desert reptiles the tortoise is above reproach from anyone. Utterly harmless and without offense it is entirely herbivorous, feeding principally on galleta grass and such dry fodder as the desert washes afford.

Those who find and carry away the tortoise expose it to worry from dogs and unthinking children. They are seldom able to provide it with its natural food. If not well penned it will escape and wander to its destruction upon the streets. There is no sensible reason for molesting the tortoise, and



. . . and he can't run away.

every reason why it should be permitted to go its harmless way.

A clearly worded protective law is needed, and soon. The one on the statute books is a fraud and a farce. The needs of museums and other accredited institutions for specimens should be recognized. If this isn't done we stand to lose one of the desert's most interesting inhabitants.

VOLLIE TRIPP

Litterbugging Coyote . . .

Desert Hot Springs

Desert:

I wholeheartedly approve of all efforts to keep the desert clean and free from rubbish.

Recently I took my trash, dug a hole 18 inches deep and buried it without trace. Passing the spot next day, I found that the coyotes had dug up my garbage, and the wind had scattered it.

Then what? Yes, I buried it again.

PAUL J. LINSLEY

The Coyote's Sweet Tooth . . .

Lone Pine, California

Desert:

Excuse a tenderfoot's question, but on page 17 of March *Desert Magazine*, Author Ruth Kirk writes that most of the fruit harvest at abandoned Hungry Bill's Ranch in Death Valley "falls to the ground to provide a feast for the coyotes."

When did coyotes turn vegetarians?

M. D. QUINLEY

"The coyote's favorite food is anything he can chew," writes J. Frank Dobie in "Voice of the Coyote." Although by preference carnivorous, he has a sweet tooth too, and delights in eating tuna (the fruit of the prickly pear), ripe watermelons, chapotes (Mexican persimmons) and other fruits and berries. No doubt Hungry Bill's ranch would provide a feast when the apricots, pears, peaches, figs and apples ripened.—R.H.

The "Old-timer Named Huff" . . .

Mentone, California

Desert:

With reference to the "Life on the Desert" story by Ernest K. Allen in the April issue, I note in your *Desert Close-ups* (page 33) that the piece concerned "an old man named Huff from the agricultural implement department of the old E. M. Cope Commercial Company of Redlands."

The name was I. M. Hough, but he was better known as Dad Hough to the many customers who have reason to be grateful for his interest in their ranch machinery problems.

You say in your column that the author "doubts whether he is alive today." Dad Hough lies buried in beautiful Hillside Cemetery of Redlands, California. My husband, Lawrence H. Ikerman, and his partner, Luther T. Holden, of the Luther and Larry Paint Store in Redlands, were pallbearers at his funeral. I was among the friends at the funeral who paused to give thanks for his enduring friendship.

I had worked as switchboard operator on my first job in the store where he was department head. He used to put his shirt sleeves on the ledge by the switchboard and talk to me about his days on the desert. Even then I wanted to write, but it was to take me years to learn that the best story of all is always right before your eyes, and you do not learn to write until you first learn to recognize that story.

I salute Ernest Allen's tribute to that grand old man who lives again in the *Life on the Desert* article.

RUTH C. IKERMAN

Coyote in Sheep's Clothing . . .

Camp Roberts, California

Desert:

We are no longer surprised at anything we find when we unload sheep shipped by the Imperial Land and Cattle Company.

First it was a coyote who descended with the sheep from the truck. Then it was a wetback who had sneaked in with the load near the border and was hiding among the sheep.

We have quite a number of wetbacks here on the post. They sneak by the Border Patrol and they sneak by the M.P.s. The army isn't doing anything about it.

C. E. ROY

Mystery of the Canyons . . .

Ajo, Arizona

Desert:

In editing my story, "Where Hungry Bill Once Lived," for the March issue, *Desert's* editors added an erroneous bit of information — that Johnson Canyon in Death Valley was once known as Six Springs Canyon. They are not the same. Six Springs is a distinct canyon south of Johnson.

Your readers may be interested in knowing that the road to Hungry Bill's, or I should say the road leading up Johnson Canyon toward the ranch, recently was greatly improved by a mining company.

RUTH E. KIRK

The Redundant River . . .

Grants Pass, Oregon

Desert:

I have been a reader of *Desert Magazine* for quite a few years, and during that time I have never criticized any part of it. However, looking through the March issue, I again found the mistake that has grated on my nerves for a long, long time.

In the Desert Quiz, question No. 2 lists "Rio Grande River" as a possible answer. *Rio* is Spanish for "river," so "Rio Grande" is sufficient. Otherwise, translated, one would be saying "Grand River River."

E. E. WILSON

Protests Lizard Exchange . . .

Tustin, California

Desert:

It shocked me recently to learn that the Boy Scouts of America were planning a horned lizard exchange at their California Jamboree.

This suggestion can only mean that thousands of these harmless little denizens of the wastelands will be hunted out and removed from their natural habitat for eventual destruction and death.

I have spent most of my life of 50 years trying to teach youth the mean-

ing of natural beauty and an appreciation of birds and animal life. It grieves me that the Boy Scouts—a fine youth organization—cannot think of a better feature for their jamboree, one more related to the Boy Scout code than this.

I am an eagle scout and was for many years a scout leader. Under the older system of scouting, we were schooled to behave ourselves in the out-of-doors.

G. G.

According to Carl N. Helmick, scout executive of the Riverside County Council, trading will be one of the big features of the scout jamboree to be held in Riverside in July, as it was in 1950 at the Second National Jamboree at Valley Forge. Here scouts traded items from all over the world. "Some scouts from Nebraska brought cockleburs and called them porcupine eggs and traded them to unsuspecting scouts who had never seen them. The scouts from Texas and other desert points specialized in horned toads." Trading was on an informal basis and not a scheduled event.—R.H.

Uranium-rich Plateau . . .

Los Angeles, California

Desert:

In a recent Here and There news item, it is reported a prospector found a rich strike of uranium near La Sal, Utah, "in uranium rich San Juan County." Does this mean the country is loaded with uranium or the strike made the county uranium rich?

JAMES W. MORRIS

The Colorado Plateau, stretching over parts of New Mexico, Colorado, Utah and Arizona, is the United States' chief domestic source of uranium.—R.H.

The Grass Rope Myth . . .

Leucadia, California

Desert:

Many years ago when I was prospecting and mule-skinning in the Death Valley region the other prospectors told me how to protect myself against rattlesnakes when I was sleeping on the ground.

"Just coil a grass rope around your bedroll," they would say, "and neither a rattler nor a tarantula will cross it."

Then one night I was camped at Emigrant Springs where we killed two rattlers before rolling out our beds on the ground. I coiled a grass rope around my bed and went to sleep, secure in the thought that no snake would cross that rope.

I slept late next morning and when I awakened I heard a familiar sound.

There was a rattler coiled on top of the tarp which covered my bedding. I threw the covers over the snake and hit the ground in a hurry.

After eating breakfast we began to break camp. I was folding my blankets when a big black tarantula crawled out from under the covers.

As far as I am concerned that grass rope story is just a myth.

M. M. SANFORD

Clue to Buried Treasure . . .

Escondido, California

Desert:

I have in my possession a log and map of treasure and mines given to me by a friend, an old Mexican now passed on, and taken from the archives of the Jesuits.

I am seeking some group of mining people or some individual who might be interested in such a log and map. The log is in formal English, but the map measurements are in Spanish terms. The treasure alone, without the five mines located, is said to be worth \$40,000,000.

My husband sought and found some of the log guideposts during a short stay in the area described by the map.

HAZEL E. M. LINDAMAN

There are so many forged or fraudulent treasure maps in circulation, it is difficult to spot an authentic one. Many of the faked maps are so cleverly executed that they look quite genuine. Mrs. Lindaman may have the real thing. Any treasure hunters interested?—R.H.

Beware the Rattlesnake . . .

Crown Point, Indiana

Desert:

Some friends and myself took a vacation several years ago and did some prospecting for gold. We enjoyed it so much that we would like to try it again this year, about the first of July.

On our previous trip, we saw two live rattlesnakes. We would like information as to the best method of destroying them and protecting ourselves, also if a prospector may carry a gun.

CHARLES D. MANDLY

Actually, the danger of being bitten by a rattlesnake in the desert country is greatly exaggerated. You may camp for years on the desert mesas without seeing a snake. Rattlesnakes cannot stand the direct rays of the summer sun, hence they remain in the shade or come out at night. Best protection against them is alertness. There is no law against carrying unconcealed weapons in western states.—R.H.

Here and There - on the Desert

ARIZONA

Sheep Sale Tests Law . . .

GANADO—Sheriff John T. Crosby of Apache County auctioned 19 sheep and four goats seized under court orders to pay a Navajo Indian couple's debt to a trader. The sale brought \$272. The auction of the property of Paul and Lorena Williams was another step in a case testing power of the state of Arizona and the Arizona courts to enforce state laws on Indian reservations. Williams had reduced the original debt of \$300 to less than \$100 when Lee went to court and had the flock seized. Court costs and maintenance of the stock cost Williams approximately \$200. He will appeal the case.—*Arizona Republic*.

Bronco Bill Rests at Boothill . . .

TOMBSTONE — Bronco Bill was placed to rest at Boothill Cemetery, March 27, at funeral rites attended by a few dry-eyed spectators who never knew Glen "Bronco Bill" Will. Will's ashes had arrived at the Tombstone Chamber of Commerce offices a few days earlier, shipped C.O.D. from Oakland, California. In a telephone conversation with Mrs. Edna Landin, the old timer's son explained that his father had wanted to visit Tombstone this spring, so when he died he just shipped the ashes. Will, 82, visited Tombstone only once — when he was 14 years old.—*Tombstone Epitaph*.

Indians on Warpath . . .

TUCSON — The Indians of the Southwest are on the warpath again — but this time the common enemies are poverty, disease and ignorance. After almost a century of spatial and social isolation, they are rising up on their reservations to take an active part in the management of their own affairs and to develop tribal enterprises and resources that will mean a better way of life for their people. This is the major finding of the first annual report of the University of Arizona's Bureau of Ethnic Research, which has just been published under the title, *Indians of the Southwest*. The report presents the first comprehensive summary of all available information relating to Indian tribes and Indian administration in Arizona — where an Indian population of 70,000 gives the state the largest concentration of Indians in the country.—*Yuma Daily Sun*.

Huachuca Buffalo Rustling . . .

TUCSON—Rustlers apparently are at work among the buffalo herd at Fort Huachuca. Dr. Guy Gillman, member of the board of directors of the Cochise County Sportsmen, is convinced that at least 40 of the spring crop of buffalo yearlings are missing. Other evidence — damaged fences, empty cartridge shells near a wounded buffalo — supported Dr. Gillman's suspicions, and he urged a thorough investigation. Two hundred fifty of the animals were killed legally by hunters in January.—*Phoenix Gazette*.

Yuma Rejects Indian Roads . . .

YUMA—Yuma County board of supervisors has advised representatives of the U. S. Indian Service that the county isn't interested in taking over 140 miles of Indian roads until the Indians attain full citizenship rights. The county will be duty bound to care for the roads and for 20 miles of trails when the Indians become citizens and the land which has formerly been withheld from the tax rolls becomes taxable.—*Phoenix Gazette*.

Propose Phoenix Zoo . . .

PHOENIX—"There is a large variety of animals indigenous to Arizona which are not on display anywhere in Phoenix," pointed out J. Robert Burns, director of publicity for the Phoenix Chamber of Commerce, in urging a zoo be established in the city. Burns suggested the zoo be a part of either South Mountain Park or Papago Park and that it be maintained by a non-profit zoological society.—*Arizona Republic*.

Historic Fort Demobilized . . .

FORT HUACHUCA — Fort Huachuca, the old scout of army installations which has feasted and famished through 76 years of congressional appropriations, is again taking up the slack in its webb belt. The Department of the Army has ordered that the fort be placed on a stand-by basis, which means that only a small detachment of housekeeping troops and fire guards will remain after July 1. The installations at Fort Huachuca recently were renovated and improved, and a new landing strip was dedicated last December. The fort will continue to be used for summer encampments of national guard units.—*Phoenix Gazette*.

New Colorado River Bridge . . .

YUMA—The highway departments of Arizona and California have started exploratory work on a new Colorado River bridge. The bridge is planned as a continuation of Yuma's Fourth Avenue and would carry most of the through traffic, thus relieving the present bridge. California is handling exploration for abutment footings on the north side of the river, while Arizona probes shorelines on the south side.

Poetry Day in Arizona . . .

PHOENIX—In a verse proclamation, Governor Howard Pyle proclaimed April 9 "Poetry Day in Arizona." The date marks the death of Sharlot Hall, Arizona pioneer and poet laureate of the state.

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CALIFORNIA

Death Valley Improvements . . .

TRONA—From 152,000 in 1948, visitors to Death Valley National Monument have increased to 296,310 in 1952. Added facilities are needed to take care of these tourists, Acting Superintendent E. E. Ogston told members of the Death Valley 49ers at a meeting in Trona. Accordingly, the 49ers passed resolutions recommending that comfort stations be established at ranger headquarters; that public officials be notified of the need for a multiple use vehicle and first aid training for Death Valley rangers; and that a program to preserve desert holly and desert rocks be launched. A final motion set the dates of the 1953 49er Encampment at Death Valley for November 15-16.—*Trona Argonaut*.

It's Official—Lee Vining . . .

LEE VINING—A letter from the postmaster general's office in Washington, D. C., has made it official. From now on this Mono community's name will be spelled Lee Vining, a change from the former one-word designation, Leevining. The town was named for Lee Vining who settled there in the early 1860s after a harrowing trip through Bloody Canyon. The new spelling, chamber of commerce officials hope, will eliminate many of the mispronunciations used in the past.—*Inyo Register*.

Mark Pioneer Site . . .

INDIAN WELLS—In honor of the early Cahuilla Indians who dug the original Indian well and of the pioneer settlers, prospectors and stage line passengers who camped later at the county well nearby, a stone monument was placed at Indian Wells, six miles west of Indio. The marker was erected and dedicated by the Coachella Valley Pioneer and Historical Society.—*Coachella Valley Sun*.

Buy More Duck Lands . . .

INDIO — The California Wildlife Conservation Board has decided to purchase additional acreage to replace leased lands now flooded in the state's present Imperial Valley Waterfowl Management Area on the shores of Salton Sea. The 400-acre parcel of developed and raw shorelands, offered the state in willing sale by Imperial ranchers, will give Southern California sportsmen nearly 10,000 acres of prime waterfowl hunting area and good upland game hunting grounds when integrated and developed. The waterfowl area was decreased when Salton Sea waters rose last year and flooded the shores. — *Indio News*.

Claims Rise With Sea . . .

MECCA — A second \$50,000 suit against the Coachella Valley County Water District and Imperial Irrigation District for damages caused by encroaching waters of the rising Salton Sea has been filed by Ralvert and Company. Ralvert's second suit brings to \$622,500 the claims against the two districts for water intrusion on lands adjoining the sea. Supplemental claims also have been filed by the Desert Beach Corporation. The sea rose another eight inches from January 2 to March 23 of this year.—*Date Palm*.

PALM SPRINGS — Lloyd Mason Smith, who resigned his position as director of the Desert Museum in Palm Springs after five years of service there, left May 15 to assume a place as summer ranger in the Park Service at the Petrified Forest National Monument in Arizona.

Remnant of the Past . . .

LONE PINE—Paleontologists have identified a tusk found in a clay pit near Lone Pine as that of an Imperial Mammoth that lived 15,000 to 20,000 years ago. The tusk, found by Los Angeles Department of Water and Power employees working in Owens Valley, will be placed in a museum at Lone Pine.—*Inyo Independent*.

New Water Techniques . . .

WASHINGTON — New techniques for measuring water evaporation have been perfected by government scientists. Four separate methods of calculating water loss through evaporation were tested by the U. S. Geological Survey, and information was gained which may prove "of high practical value in creating adequate water supplies for the nation." Accurate calculations are needed so that water supplies can be managed efficiently. They permit engineers to know precisely how many dams on a river will give the largest water supply. Too many dams, scientists point out, actually can cut the total water supply through evaporation on overextended water surfaces.

NEVADA

May Open 165,794 Acres . . .

WASHINGTON—A bill to open public lands withdrawn for the development of power projects has been approved by the house interior subcommittee on mines and mining and awaits congressional approval. The bill would apply to 165,794 acres in Nevada, much of which has been withdrawn for a period of 43 years. During that time, many persons have filed mining claims only to find later that

the claims were on federally withdrawn land. Under the proposed bill, all persons who have filed previously would be permitted to re-establish their claims.—*Battle Mountain Scout*.

Plans Desert Development . . .

LAS VEGAS—A farming industry that will reap \$10,000,000 yearly is predicted for Nevada's Sandy Valley by L. C. Houk, land developer who built the vast San Joaquin Valley farming empire in California. Houk has bought 30,000 acres of land in Sandy Valley, on the western edge of Pah-rump Valley, 50 miles from the heart of Las Vegas. Part of the tract already is under cultivation, watered by 14 newly dug wells. A total of 120 wells is planned. Houk also is rebuilding the ghost town of Goodsprings as a shopping and recreation center for farmers.—*Las Vegas Review-Journal*.

Protect Wild Horses . . .

CARSON CITY—Wild horse herds on the Comstock would be protected by a bill recently approved by the Nevada assembly. The measure prohibits harassment of any bird, animal or other creature from aircraft, and is aimed primarily to prevent drives on the few remaining bands of wild horses.—*Reno Evening Gazette*.

CARSON CITY — Nevada State Park Commission, created in 1953, has been reactivated by Governor Charles H. Russell. Two early achievements of the newly reborn group are the winning of funds for the Nevada State Museum at Overton in Moapa Valley and for the Old Genoa Fort in Douglas County.



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Comstock Museum . . .

VIRGINIA CITY—The Comstock will have a new museum if plans of Versel McBride are carried out. McBride has bought the King Mansion, one of the show places of boom-town Virginia City, and plans to spend \$40,000 on its restoration. He expects to open it as a museum in the spring of 1954. The mansion was built by Homer S. King in 1863 at an estimated cost of \$150,000.—*Territorial Enterprise*.

Lahontan Spillage Starts . . .

FALLON—Dumping of water from Lahontan reservoir down the Carson River to the Pelican Island area was begun April 15. The lake was above its natural crest and backing up against flash boards, holding 280,128 acre-feet of a capacity 290,000. Daily gains of 500 or more acre-feet would have put the reservoir over the top of the boards about April 25. According to Watermaster Harry Richards, this is too early, so spillage was started at the rate of 500 second-feet to balance the intake from the Carson.—*Fallon Standard*.

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Indians Under the State . . .

WASHINGTON — Congressman Cliff Young of Nevada has introduced a bill to give the state of Nevada jurisdiction over offenses committed by or against Indians on Indian reservations. Under the provisions of the bill, the Secretary of the Interior would be authorized to enter into agreements with the state and counties to help defray expenses of the enforcement of criminal laws on the reservations. — *Pioche Record*.

Suggests Hoover Dam Coin . . .

BOULDER CITY—At the request of the Boulder City Chamber of Commerce, Senator George W. Malone introduced a bill in the U. S. Senate, suggesting that the U. S. mint turn out 50-cent pieces imprinted with the likeness of Hoover Dam. It was while Senator Malone was Nevada state engineer that the dam was started. The bill was referred to the Senate committee on banking and currency. — *Las Vegas Review-Journal*.

Drivers Note Birthdates . . .

CARSON CITY—According to the new driver's license law in Nevada, all operators' licenses will expire on the birthdate of the applicant every two years. All applicants whose birthdates fall between January 1 and June 30 may renew their licenses now for 1953. Applicants whose birthdates fall between July 1 and December 31 will renew on their birthdays. The fee for operators' licenses remains the same, \$1.00.—*Caliente Herald*.

NEW MEXICO

Dry by Mid-June . . .

ALBUQUERQUE — Middle Rio Grande farmers, already hard hit by frosts which killed an estimated 50 percent of fruit blossoms, face the prospect of no irrigation water by June. Hubert Ball, engineer for the Middle Rio Grande Conservancy District, says he expects the Rio Grande to be "practically dry" by mid-June, judging by present water supply forecasts.—*Springer Tribune*.

Water Prospects Poor . . .

SANTA FE—Water prospects for New Mexico's four main river basins have declined sharply because of little or no precipitation during March. A joint study by the U. S. Weather Bureau and the Soil Conservation Service issued April 1 showed even more discouraging water supplies than the meager forecasts indicated earlier. Current predictions for the Rio Grande Valley are for 40 to 50 percent of average run-off for lower tributaries; 60 percent for upper tributaries; but only 30 percent of normal inflow for Elephant Butte Reservoir on the lower river. Expected flows for the San Juan Basin are 45 to 60 percent of normal; for the Pecos River Basin, 21 to 53 percent; for the Canadian River Basin, 36 percent of the 10-year average.—*New Mexican*.

School on Wheels . . .

GALLUP—Elmer Anderson's pupils can't come to him, so he takes school to them in a stainless steel house trailer. The school, one of five set up recently on the Navajo reservation, is designed to give Navajo children a working knowledge of English, so they will be prepared for later studies at established boarding schools. Actually the whole school plant consists of five trailers, one the home of Anderson, his wife and two children, another a lunchroom-kitchen, another the living quarters of a cook-housekeeper and the fourth a washroom where Anderson's pupils can wash and take showers. He teaches 24 Indian children, ranging in age from 6 to 12 years, none of whom have had any previous formal education. — *New Mexican*.

May Delay Navajo Agua . . .

ALBUQUERQUE — A Bureau of Reclamation personnel reduction order issued by Secretary of Interior Douglas McKay may delay groundwork on the San Juan diversion and Navajo irrigation project. The bureau is conducting surveys of water needs in both the San Juan Valley and the Rio Grande Valley as the first step in asking Congress for authorization of the controversial development program. The payroll order may cut field personnel 25 percent.

As planned, the project would include cutting a trans-mountain canal to divert water from the San Juan to the Rio Grande, construction of the Navajo Dam and of Shiprock and San Juan irrigation projects. Residents of San Juan County have bitterly, and so far futilely, protested the diversion of water from their river to the Rio Grande.—*New Mexican*.

Buffalo S

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Buffalo Skin Art . . .

SANTA FE—A religious painting on tanned buffalo skins was presented to the Museum of New Mexico at Easter time, the gift of Mr. and Mrs. John Gaw Meem. With this acquisition, entitled "Christ Washing the Feet of the Disciples," the museum owns 11 of the 30 such paintings known to exist. It is 8 feet 7 inches wide by 4 feet 6 inches long. The generally accepted theory of these paintings on tanned buck, elk or buffalo skins is that they were the work of Franciscan fathers who wanted to provide religious pictures for their wards at a time when more conventional art materials were not available.—*New Mexican*.

Rare Otter Caught . . .

MOGOLLON — A rare aquatic mammal was accidentally caught by State Game Department Trapper T. J. Lyons recently in one of his beaver traps along the Gila River. Quick-frozen, the animal was rushed to the department's Santa Fe office where biologists identified it as an Arizona otter, first one of its type seen since 1886. In recent years, experts believed the animal had become extinct. The otter's body was shipped to the Museum of Natural History in Washington, D. C., for study. The pelt is being mounted and will be added to the department's permanent collection of New Mexico wildlife.—*Aztec Printer-Review*.

Citizenship for Indians . . .

TAOS—Full citizenship for all Indians and repeal of discriminatory laws are advocated by Secretary of the Interior Douglas McKay. "We must put the Indians on the same basis as all other citizens," McKay commented recently. "We must cut out the wardships and let them go to work. If they are wards of the government, they have no value to the government." The secretary said his department is starting a program to restore the Indians' full citizenship. One of the first steps, he said, is to get all of the Indian children into public schools.

UTAH

Upper Colorado Senators Unite . . .

WASHINGTON—In united action, senators of Upper Colorado River Basin states joined in sponsoring bills to authorize five big dams for the proposed billion-dollar Upper Colorado Project. Included are the Echo Park and Flamingo Gorge dams and the already authorized Central Utah Reclamation Project, key units of the vast multiple purpose undertaking. Identical bills were introduced simultaneously in the House.

Deer Forage Critical . . .

MONTICELLO—Range rides undertaken by representatives of the Utah State Fish and Game Department indicated poor forage conditions for deer. The Shay Mesa and Cottonwood Wash areas northwest of Monticello appeared to be the most critical areas examined. The majority of forage shrubs used by the deer are dead or severely injured by overuse. Much of the area is too inaccessible to be hunted on foot, and so the deer herds were not sufficiently harvested to protect forage for the remaining animals. It is hoped that more access roads can be constructed into this area in the near future.—*Dove Creek Press*.

Deer Creek Given Axe . . .

WASHINGTON—One Utah project was killed, another threatened by a \$54,000,000 slash in the Bureau of Reclamation budget. Eliminated from the administration's proposed program for the next fiscal year was \$148,000 for the first phase of Deer Creek power plant in Utah. Threatened was the Weber Basin project, in a group of projects from which \$16,000,000 was still to be cut. The Deer Creek power plant has long been under consideration by the bureau. Total estimated cost was \$900,000 of which \$188,000 was scheduled for the next fiscal year under earlier budget requests.—*Salt Lake Tribune*.

Spring Snow No Help . . .

SALT LAKE CITY — A spring snow storm, local in scope and containing a relatively low water content, did not alleviate the poor overall water supply outlook for Utah, reported the U. S. Weather Bureau and Soil Conservation Service. The one bright spot in the water picture is the large carry-over storage held in most of the state's reservoirs. "Water users depending

on natural flow rights will experience definite shortages if continued sub-normal precipitation prevails. But users in central and northern Utah having storage rights will have ample water during the irrigation season," the report concluded.—*Salt Lake Tribune*.

Explore New Cave . . .

ST. GEORGE—At the request of the Department of the Interior, Utah's Dixie Grotto of the National Speleological Society will explore a cave discovered by a forest ranger last fall. The underground party will be equipped with field telephones and mapping equipment, emergency rations and various kinds of safety equipment for a complete exploration of the cave, said to be quite extensive and of rare beauty.



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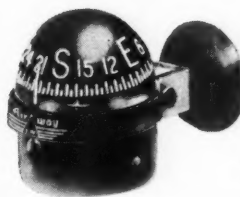
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Mines and Mining

Tonopah, Nevada . . .

Summit King Mines, Ltd., is sinking a winze on the 300-foot level of its new orebody about two miles north of Tonopah. A large body of good ore, showing the characteristics of the old Tonopah mines, has been outlined. The winze is expected to strike it at greater depth, when plans will be made for future development of the silver-gold ores encountered. — *Tonopah Times-Bonanza*.

Kayenta, Arizona . . .

Watched closely as possibly Arizona's first oil or gas well is the Texas Company exploration in Navajo County, north of Kayenta and 3300 feet south of the Utah state line. The drilling, on leases pooled by Stanzona Petroleum Corporation, Texas, Skelly and Sinclair, is in Black Mesa Basin west of Monument Valley. The leases are within the 83,000-square-mile Four Corners area geologized by General Petroleum Company and regarded as favorable for discovery of oil. — *Arizona Republic*.

Reno, Nevada . . .

Another rich undeveloped mineral area in Nevada has been taken over by a major mineral company. Kennecott Copper Corporation's wholly owned subsidiary, Bear Creek Mining Company, has taken an option for \$600,000 on 18 patented mining claims in Nevada's Jumbo district. The company plans a diamond drilling program to determine the extent and grade of scheelite mineralization with the hope of developing sufficient ore tonnage to warrant large-scale mining and milling operations. — *Mining Record*.

Virginia City, Nevada . . .

Some of the glamor and excitement of boom-day Virginia City returned with the discovery of a rich orebody near here. Fred Hess, long-time resident of Gold Hill, made the strike in the upper or western section of the old California segment of the famous Comstock Lode, in a parallel vein to the bold croppings which can be traced by the eye from the north to the south end of the city when looking to the west. A temporary shaft has been sunk, and about four tons of ore already removed. The ore is expected to run from three to four hundred dollars a ton at the Selby smelter. — *Pioche Record*.

Humboldt, Nevada . . .

Discovery of uranium ore 35 miles northwest of Oroville has resulted in a careful study of the terrain by the Atomic Energy Commission and filing of scores of claims in the vicinity. Humboldt County Recorder Joe L. Germain reported that more than 100 claims have been filed on land throughout the area in the vicinity of the discovery of three Winnemucca men, Jess Nachiando, Ervin Sweeney and James Murdock. AEC geologists from Salt Lake City are exploring the region by plane with a scintillometer. — *Battle Mountain Scout*.

Wenden, Arizona . . .

The federal government's manganese sampling plant and purchasing depot at Wenden, opened in February, is already the largest in the nation. After but 40 days of operation, the plant, located on U. S. Highway 60-70, had received 191,000 long dry-ton units of manganese and had paid producers more than \$200,000. That total is greater than the government's similar depot at Deming, New Mexico which has been operating more than a year. The Wenden supply is from 46 shippers representing 51 mines. — *Arizona Republic*.

Marysville, Utah . . .

An 850-foot air shaft has been sunk to the farthest workings of the extensive Deer Trail Mines near Marysville. The shaft was found necessary to get powder smoke away from the working face of the 4950-foot tunnel. When the air shaft is completed, the tunnel will extend to 6864 feet. Deer Trail ore contains a variety of selenium, mercury and zinc compounds as well as a little gold. — *Garfield County News*.

Tucson, Arizona . . .

Bids are out for construction of a \$20,000,000 town at the San Manuel Copper Mine between Oracle and Mammoth. The Del E. Webb Construction Company of Phoenix had signed a contract with Magma Copper Company for construction of the community; but, since the site is designated a critical defense housing area, the contract must be awarded on the basis of competitive selection, said Richard S. Hare, FHA director for Arizona. — *Yuma Daily Sun*.

Mountain City, Nevada . . .

Garnet Tungsten Mine Company has taken a lease and option to purchase the Knowles Brothers-Price Montrose tungsten property 18 miles east of Mountain City. Garnet Tungsten has been working on the property since July, and extensive diamond drilling and other surface work has been done. Early construction of a mill is planned. — *Humboldt Star*.

Reno, Nevada . . .

Construction is in progress on a new mill to process manganese in the Steamboat Springs area west of Highway 395. The work is being done by the Nevada Ore Refining Company, which has acquired control of four manganese deposits 12 miles southeast of Carson City. For the past several months, the company has been producing ore and stockpiling it. Operations presently are by stripping, but may go underground later. — *Territorial Enterprise*.

Yuma, Arizona . . .

The Red Cloud mine in Yuma County, idle for 64 years, is preparing for an extensive diamond drilling program. Yuma Metals Company also plans a drifting program as well as installation of a 100-ton pilot flotation mill. The mine is standing in fine shape without timbering. It is said that approximately \$1,000,000 in high-grade silver ore was taken out by the early miners, who left 50,000 tons of highgrade milling ore in place in the stopes and on the dumps. When another 50,000 tons of ore is developed, the pilot mill will be installed. — *Mining Record*.

Bishop, California . . .

U. S. Vanadium Corporation, the nation's largest tungsten producer, is operating its Pine Creek mine and mill at capacity of scheelite daily. The company has been buying lowgrade tungsten ores from independent producers since July, 1951, providing a market for many small operators in Inyo County. Substantial amounts of copper and molybdenum are recovered as by-products in treatment of the scheelite ore. — *Pioche Record*.

Globe, Arizona . . .

Uranium-bearing ore has been discovered by Melvin Stockton in the Sierra Ancha district, near Young in Gila County. The ore body extends beneath an asbestos deposit adjoining property of the American Asbestos Cement Corporation. Assays show uranophane, uranium oxide and metatorbernite, another uranium-like mineral. — *Yuma Daily Sun*.

Amateur Gem Cutter

By LELANDE QUICK, Editor of The Lapidary Journal

Every time we say anything about the scarcity of good mineral specimens we always get a few letters trying to prove that we are wrong. But the fact remains that with all the gem and mineral shows going on we rarely find satisfactory specimens to add to our growing crystal collection — growing more slowly than we like.

In the old mines that are still being worked not many crystal specimens are brought out by the miners because they are generally working far below the area where good specimens are usually found. We still say that "there's more in the earth than has ever been taken out" but that is an empty phrase unless some new mines are developed.

We are therefore thrilled at the recent news of the new copper deposit at San Manuel, Arizona, and the new nickel deposit in Cuba. This is wonderful news and holds a great deal of promise both for the present mineral collector and the new generation coming along, for it seems inevitable that new copper minerals will come from San Manuel and spectacular nickel specimens from Cuba. We just hope that some agate occurs in the nickel mine so that we can once again get some good apple green chrysoprase, a gem that is now scarcer than chlorophyll at the stockyards.

But we'll have to wait a while, for the operators of what is claimed as the world's largest copper deposit will not be mining copper in quantity at the new mine until 1956. The copper lies in a 700-foot thick cushion of rolling hills in a proven mineral deposit 45 miles northeast of Tucson. The old mining towns of Mammoth, Oracle and Tiger are near by. Tiger has long been noted for its fine copper mineral specimens.

But things are different today than when the old time prospectors arrived and threw down their bedrolls and started to dig. The operators of the new mine have a \$20,000,000 town on the drawing boards and they are going to build the town first and then go after the copper under the town. San Manuel will be no roaring mining camp but a town complete with high school and neon signs.

Systematic operations began nine years ago with the churn drilling of more than 120 holes over a 1500-acre site. The holes ranged from 300 to 3000 feet in depth. They were spaced in a pattern that eventually proved the deposit to be one of the largest in the world, with copper ore reserves estimated at more than 475 million tons. A mill, smelter, rail connections, additions to the power plant, offices, the town itself and other facilities will all be constructed before the first ton of ore is mined and smelted. This will represent an outlay of \$105 million exclusive of the cost of the town. To help finance this development the government has already loaned \$94 million through the Reconstruction Finance Corporation. This is reported to be the largest individual loan the government ever made to a corporation. The R.F.C. feels pretty certain of the return of the money, however, for Uncle Sam has agreed to take the first \$184 million worth of copper that comes out of the mine.

We hope that those in charge have some understanding of the value of the specimens and that some plan will be devised to recover and market the specimens that will inevitably be brought to the surface. The day has gone when mineral collecting is done by seeking out some poor old miner at death's door through starvation who has some "purty rocks" he brought up out of the mine 40 years ago. We've heard that story so often we doubt if it ever happened even once. However it is true that many a miner in the old days did lug home some beautiful specimens he didn't have the heart to throw on the ore cars.

Almost every copper mine in Arizona has had some distinctive and superlative copper mineral specimens—the azurite from the Copper Queen, chrysocolla from Miami, diopside from Tiger, etc. What beautiful thing will come out of San Manuel?

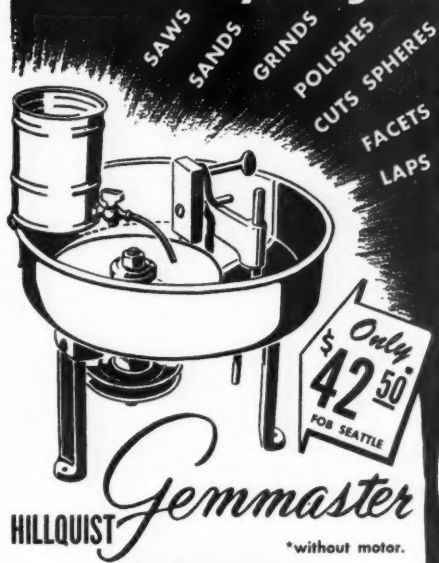
But maybe they know for it is reported that 40 miners are now drilling and bringing to the surface ore from a depth of 2000 feet. Surely there must have been some "ohs" and "ahs" already. We offer the hope that whatever the mine management does that they make the specimens available to all dealers on an equal basis and not allow anyone to establish a monopoly. Perhaps if enough dealers write to them and say so it may guide their thinking. Wesley Goss is vice president and general manager of the San Manuel Copper corporation.

The new nickel deposit in Cuba was discovered by the Freeport Sulphur company of which John Hay Whitney is board chairman. Extensive exploration has established the existence of at least 40 million tons of nickel ore in the vicinity of Moa Bay, 500 miles east of Havana. Except for a few Canadian deposits this is supposed to be the largest nickel deposit in the free world. Here again we hope that the company controlling the deposit will give due attention to the recovery of the tons of magnificent crystal specimens that will come from this mine. Our information about this deposit is meager but we believe that dealers can obtain more information by addressing the Freeport Sulphur company at Freeport, Texas, from which point correspondence can be directed to headquarters, probably in New York.

The name of this company takes us away back in memory for we remember when the largest sulphur deposit in the world was found at Freeport, Texas. It was big but it was deep and the cost of mining it was prohibitive. Then along came a smart engineer who worked with us in the same construction office in New York. He evolved the idea of merely drilling holes deep down into the earth and pumping hot water into the holes. The hot water dissolved the sulphur and then the water was pumped out again. After evaporation a mountain of pure sulphur resulted. This idea was so successful that he went out to Trona and applied the method in the dry lakes there to recover untold millions in valuable industrial minerals. And thus the 20-mule team succumbed to an idea.

Well, they can't mine nickel that way so we hope to see some beautiful specimens soon from Moa Bay.

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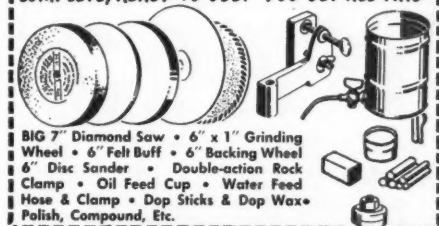
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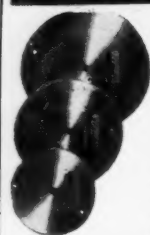
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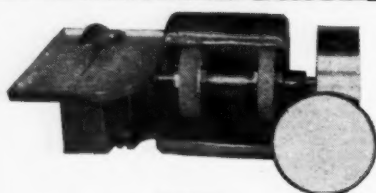
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Samples of the ore assayed in Salt Lake City by the U. S. Bureau of Mines showed two types of uranium ore running .368 and .445 percent. Government agents declared the ore to be commercial grade uranium and of importance to the government. Development work is planned.

NORTHERN CALIFORNIA SHOW DUE IN OCTOBER

Northern California Mineral Society plans an exhibit of lapidary, jewelry and mineral collections of its members October 17 and 18 at the Scottish Rite Hall, Van Ness and Sutter Streets, San Francisco.

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SAN DIEGO LAPIDARIES SUGGEST CLEAN-UP PROGRAM

"It isn't a pleasant task, to bury trash and cans left by selfish others," observed Helen Pegram in the April issue of *Shop Notes and News*, bulletin of San Diego Lapidary Society. She suggested that the San Diegans launch a clean-up program among rockhound groups. Cited particularly as heavily littered areas were the Coon Hollow and Horse Canyon sites.

"What a lovely place our desert would once again be if only all campers and rockhounds would adopt the creed of young Everett Ruess, late poet of the desert, who wrote 'Where I go I leave no sign,'" Reporter Pegram concluded her editorial.

R. E. NOWAK REGENT OF GEM CUTTERS GUILD

New officers recently elected by the Gem Cutters Guild, Los Angeles, are R. E. Nowak, regent; R. Jester, marquis; M. Terry, tablet; G. Saling, cuvette, and A. Hadley, baguette. At the March meeting, Rex Pagent, Mr. and Mrs. L. A. Rogers, Ernest Pauls and A. C. Gustafson presented a display of jewelry, rare gems, cabochons and hearts and colored glass arrowheads. A different group of members displays each month.

CHEYENNE MINERAL SOCIETY HOST TO STATE CONVENTION

Cheyenne Mineral and Gem Society will be host this year to the Wyoming State Convention of Mineral and Gem Societies. The event is scheduled June 5 and 6 in Cheyenne, Wyoming. Displays will come from mineral groups throughout the state and will feature Wyoming jade, Eden Valley wood and Wyoming agates and crystals. Dealers are invited to write W. H. Sigler, 420 West First Avenue, Cheyenne, to reserve space.

SHOW IN SOUTHERN OREGON SCHEDULED FOR MID-JUNE

Rogue Gem and Mineral Society of Grants Pass, Oregon, has announced June 13 and 14 as dates for its Southern Oregon Gem and Mineral Show. Dealer and club displays will be arranged in buildings on the Grants Pass Fairgrounds. Demonstrations of silversmithing and lapidary equipment will be special features, and field trips are being arranged for visitors to nearby mineral areas.

NEW MINNESOTA OFFICERS ASSUME DUTIES APRIL 1

New officers assumed executive duties of Minnesota Mineral Club April 1. LeRoy Peterson is president; Cedric Erickson, vice-president; Mrs. Veronica Barich, secretary; B. G. Dahlberg, treasurer; Jack Griffin, program director; Nathan Stuvetro, tour director, and Ray Lulling, publicity director.

Breakfast at the Spanish Stirrup Guest Ranch was a feature of the recent field trip of Dona Ana County Rockhound Club to the Little Floridas. Trip leaders were J. C. Patty and J. T. Kilgore.

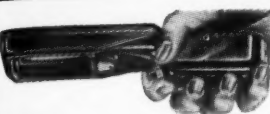
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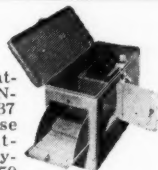
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Has bulb rated at 1000-2000 hours of use with 90-day guarantee. Includes a transformer with switch for continuous high efficiency. Price \$17.50. Model H is similar, same bulb, except has resistance cord instead of transformer. Approximately 1/2 the intensity of the TH. \$12.50



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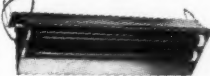
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Some materials fluoresce to short wave lengths and some to long wave lengths. Others will react to both wave lengths but with different color responses. Although practically all commercially important minerals (the ones that have real monetary value) are activated by short wave, many collectors specialize in the more unusual long wave minerals.

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Canoga Park
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The Sterling Shop
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MOJAVE DESERT GEMSTONE, beautiful moss, plumes, rainbow, Horse Canyon, banded and other gemstone from many parts of the country. Send for our DeLuxe Selection of 25 sq. inches, or an 8 lb. mixture of high grade gemstone for \$5.00 shipped prepaid with our money back guarantee. Hunt your gemstone in our rock yard; we will ship prepaid and insured, 50 sq. inches selected gemstone for your approval, send 25c per inch for what you keep and return the balance prepaid and insured. Write for our gemstone price list. We sell Highland Park lapidary equipment, Congo reversible saw blades, write for literature. San Fernando Valley Rock Shop, 6329 Lindley Ave., Reseda, California.

AMONG THE ROCK HUNTERS

Ralph Botter outlined the history of the Rio Grande River for El Paso Mineral and Gem Society. He discussed the geology of the country through which it passes, from headwaters in Colorado to El Paso. The Rio Grande is an old stream, said Botter, and its course has been changed many times by uplifts and great volcanism; scientists find it interesting to trace some of its former river beds.

A 121-carat green peridot from St. Johns Island in the Red Sea, an Oriental ruby brilliantly cut and over 7 carats in size, and a sinhalite of 158 carats were among the gemstones displayed by William E. Phillips when he appeared as guest speaker for Southwest Mineralogists, Los Angeles, California.

Mineralogical Society of Southern California scheduled a field trip to Winchester to collect andalusite crystals.

Dr. William E. Powers, geographer at Northwestern University, spoke at the April meeting of Chicago Rocks and Minerals Society. Dr. Powers was one of the leaders of an international group of geographers and geomorphologists on an 8000-mile trip through the United States. He showed colored slides taken on the trip.

A guided tour of the old Rawhide ghost town and mining district was taken by 35 members of the Mineral County, Nevada, Rockhound Club. A printed itinerary was furnished each member by the field trip committee.

"Minerals of San Diego County" formed the April program for San Diego Mineral and Gem Society.

At the April meeting of the Western Mining Council, Fritz Wart, a past president of the San Diego Mineral and Gem Society, described and demonstrated the use of the blowpipe for mineral identification. President Jess Hume, of the San Diego chapter of the council, demonstrated a portable homemade furnace that can be used to heat drills or picks for sharpening. A blow torch is used to furnish the heat.

Martin Pollock told members of Santa Fe Gem and Mineral Club about the history and mineral deposits of San Pedro area of the Big Ortiz mine grant near Santa Fe. After the program, plans were discussed for a trip to the area.

"Diamonds With a Past" was Don Trone's topic when he appeared as guest speaker for Wasatch Gem Society, Salt Lake City, Utah. Trone is diamond expert for Daynes Jewelry Company.

Gem and Mineral Society of San Mateo County, California, planned to visit Morgan Hill and search for the area's famous jasper and cinnabar in agate.

"The Earth's Rocky Crust," a sound movie, described the formation of the earth, the contraction and expansion of its crust, for members of Delvers Gem and Mineral Society, Downey, California. "Geysers and Hot Springs," a second film, explained the action of geysers and hot springs as part of the process of volcanism. Animated charts of geyser eruption were particularly informative.

Early American geologists and geological surveyors formed lecture material for James O. Montague of the Wisconsin Geological Society when he spoke before the Marquette Geologists Association in Chicago. Montague has made an intensive study of these early Americans and has a large library on the subject.

A silent auction for the benefit of the club treasury was one of the planned features of the Colorado Mineral Society annual banquet, scheduled May 15 in Denver.

Past presidents of Tacoma Agate Club planned the March 16 program. Dr. D. M. Pifer of the University of Washington School of Mines spoke on diamonds and diamond mining in Africa. For several years Dr. Pifer was manager of the De-Beers diamond mine in Africa. He showed moving pictures of the mining operations there.

A surprise program entertained Minnesota Mineral Club at a recent meeting in Minneapolis. Members, one for each letter of the alphabet, were asked to give short impromptu speeches on some phase of the mineral collecting hobby. Discourses ranged from "Dos and Don'ts of Rockhunting in the Black Hills of South Dakota" to "The Fun I've Had as a Member of Minnesota Mineral Club" and a description of the proposed directory of the Midwest Federation of Mineralogical Societies.

H. W. Boblet projected thin sections of polished rock on a screen for members of San Fernando Valley Mineral and Gem Society.

Fred Salfisberg spoke on the unusual formations of crystal in the geology of the Eocene period when he appeared before Cheyenne Mineral and Gem Society as guest speaker. He displayed choice pieces from his collection of Eden Valley woods.

Members of Washoe Gem and Mineral Society, Reno, Nevada, heard a talk on opals by Keith Hodson, owner and operator of the Rainbow Ridge mine in Virgin Valley, Nevada. Hodson owns the world's largest fire opal, and he brought it for the Washoe club to see.

Fred Gruner, chairman of San Diego Lapidary Society's membership committee, has announced a membership contest. To each new member and the old member who sponsors him, will be presented a polished cabochon. At the end of six weeks, a drawing will be held, the winning member and his newcomer each receiving a cabochon set in silver.

To advertise its April show, Fresno Gem and Mineral Society arranged displays in shop windows in Fresno, California.

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Tulare County Rockhound Club held a gem exhibit in May.

Tacoma Agate Club is assembling equipment for its proposed lapidary classes. Already in the workshop are a grinder, sander, polisher and trim saw. A few more pieces of machinery are necessary before classes can begin.

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Slabs, per square inch. .80
Polished cabs, 18x13 mm., each. 2.00

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lbs. minimum order for. 2.00

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4 diff. genuine Tourmaline, 8 to 10 mm. 4.90
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4 gen. Peridot, 3 to 5 mm. round. 3.90
4 gen. Aquamarine, 5 to 7 mm. 3.90
Genuine Amethyst faceted hearts,
drilled for studs, 10 to 12 mm. each. 1.50
Gen. Brazil Agate Marbles, medium size 70
large size 1.00

TURQUOISE NUGGETS (POLISHED)

Drilled (Approx. size) Non-drilled
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1/4 lb. Garnet (deep rich color) 4.00
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A special seventh birthday cake—decorated with Indian symbols—was enjoyed by Chicago Rocks and Minerals Society at a birthday celebration. The cake was the handiwork of Frank Kerling.

Mrs. Edna Nichols, president, and Katharine Kelly, past secretary of Hemet-San Jacinto Rockhounds, have been elected delegates to the state convention in San Diego in July.

Genuine "rockhounds" are the lapidary specialty of Tommy McDowell of the Nebraska Mineral and Gem Club. He cuts agates in the shapes of dogs, polishes and mounts them as pins or tie clasps.

Gus Brown in *News Nuggets*, the Central Iowa Mineral Society bulletin, gives the following formula for removing rust spots from geodes and crystals: one part sodium gluconate, one part ammonia water (36%), one part sodium citrate; add seven to ten parts water and soak specimen in it.

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NEW ROCKHOUND OFFICERS NAMED BY TUCSON SOCIETY

Hughes Rockhounds of Tucson Hughes Aircraft Plant have elected Bill Chesney to serve as president this year. Other new officers are Ed Van Scise, vice-president; Mrs. William Chesney, secretary, and Mr. Scott, treasurer.

First in a series of three movies entitled "Beginning of History" was shown at the April meeting of the Oklahoma Mineral and Gem Society. These films portray the activities and development of prehistoric man from the Stone Age 4000 years ago through the succeeding Bronze Age and Iron Age. The latter two films will be shown at future meetings.

Slides of the Harvard collection of minerals were shown by Mrs. A. H. Murchison at an evening meeting of Tucson Gem and Mineral Society. One of the club's recent field trips was to the Helvetia mining camp where specimens of copper and associated minerals were obtained.

Death Valley was the destination of Searles Lake Gem and Mineral Society on an April outing. Eddie Redenbach was field trip leader and pointed out interesting mineralogical and historical features of the valley.

A topic of interest to lapidary and mineral collector alike, "The Lapidary Method of Metallic Ore Identification" was discussed by W. K. Buhn at a meeting of East Bay Mineralogical Society, Oakland, California.

A field trip to the Jacumba area of California was planned by the mineralogy division of San Diego Mineral and Gem Society. Members would visit the Sherry Ann Mine, a rhodonite deposit with quartz, grossularite garnet and minor amounts of tremolite and wollastonite. Black oxides of manganese, chiefly pyrolusite, also are common in the area.

Many agates and some attractive jasper pebbles were gathered from Pescadero Beach by East Bay Mineral Society on a spring field trip.

Erna Clark brought her lecture, "Iris Agate and Its Treatment" to Palm Desert, California, for the April meeting of Shadow Mountain Gem and Mineral Society. She showed choice pieces from her iris agate collection as illustration.

Junior rockhounds of Coachella Valley Mineral Society came home from the Hauser Geode Beds with an assortment of geodes. Several week-ends later, a field trip to the gravel pits near Blythe, California, netted petrified wood, fossils and agates of varied hues.

Calaveras Gem and Mineral Society, Angels Camp, California, invited Contra Costa Mineral Society on an overnight field trip to Angels Camp. The groups visited mineral locations in the area.

Design and construction of display cases were discussed by Northern California Mineral Society members at a meeting in San Francisco. The club is looking forward to displays at the California Federation exhibit in San Diego in July and at its own show, tentatively scheduled for October.

"The Magic of Black Light" was the topic at the April meeting of the Mineralogical Society of Southern California. A representative of Ultra-Violet Products Company demonstrated the uses of black light in mineral collecting.

With colored slides and a printed lecture, Dr. J. Daniel Willems of Chicago tells the "Story of Gems." The package program was procured for the second meeting of new Evansville Lapidary Society. Afterwards, an auction sale was held to collect funds for the purchase of equipment for the Evansville Y.W.C.A. craft room, where the group meets.

Maps of the Red Cloud Mine and Castle Dome area between Quartzsite and Yuma, Arizona, charted the April field trip of Coachella Valley Mineral Society, Indio, California. Red Cloud Mine offers good wulfenite specimens; fluorite, barite, galena and vanadinite may be found at Castle Dome. The group planned to camp along the Colorado River.

Slonaker's Museum at Smilk Ranch was visited recently by Everett Rock and Gem Club, Everett, Washington.

Archeological interest group of the Earth Science Club of Northern Illinois plans a series of lectures to acquaint members with the different prehistoric peoples of Illinois. Artifacts and colored slides will be used to illustrate various archeological periods.

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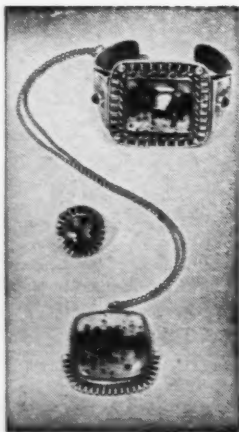
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Result of several months of photographic work was shown to San Antonio Rock and Lapidary Society at a recent meeting. Herb Ohms and Joe Murphy projected slides they had taken of mineral specimens. Description of each specimen was shown simultaneously on an adjoining screen.

Cleavage is discussed in the technical department of the April issue of *Rockhounds Call*, bulletin of Compton, California, Gem and Mineral Club. Earl Williams conducts the department, and Don McClain illustrates theories with line sketches.

Humboldt Gem and Mineral Society, Eureka, California, is assembling specimens for mineral displays at the Redwood Acre Fair in June and the Humboldt County Fair in August. Members also contribute display pieces to the Eureka Museum. They hoped to find more cutting material on an agate-hunting field trip to the beaches of Crescent City and Smith River in April.

"Bring chisels and heavy hammers if you want good travertine," Field Trip Leader Bill Maurer advised fellow members of Delvers Gem and Mineral Society, Downey, California. The society planned an April field trip to Mule Canyon, near Yermo, California. Agate, sagenite and petrified palm also are found here.

Pasadena Lapidary Society has plans for shooting a short movie film on the techniques of cabochon making.

Mineralogical Society of Arizona found so many good specimens on their first trip to the Silver Reef Mine south of Casa Grande, Arizona, that they decided to return. The area yields secondary lead materials, and amethyst is found not far from the main workings. Although not spectacular, the crystals are interesting, often being coated with minute crystals of vanadinite or wulfenite.

Third annual photo contest of Compton Gem and Mineral Club was announced in April. Judges will select winners from pictures of field trips, mineral specimens and club personalities.

A favorite collecting area, California's Chuckawalla Springs, was visited in April by Long Beach Mineral and Gem Society. Members looked for snowflake nodules and iris agate.

ANSWERS TO DESERT QUIZ

Questions are on page 18

- 1—A device for grinding ore.
- 2—The Superstition Mountains.
- 3—Flasks. Cinnabar is an ore of mercury, a liquid.
- 4—Wickenburg.
- 5—Arizona.
- 6—Fremont River.
- 7—Roasting agave.
- 8—Lost Dutchman mine.
- 9—Utah.
- 10—William Lewis Manly.
- 11—Yellow.
- 12—Saguaro.
- 13—New Mexico.
- 14—Gadsden Purchase.
- 15—Highway 80.
- 16—Clyde Forsythe.
- 17—Cahuilla Indians.
- 18—Colorado River.
- 19—Arthur P. Davis, former Director of Reclamation.
- 20—Pottery.

A Rockhound's Farewell

By HARRY ZOLLARS, Editor
Voice of the El Paso Rockhounds

Goodbye, Old Pal, how I regret
To pen these words! I can't forget
The happy hours together spent
Rockhounding to our hearts' content,
Afield, or with our spinning laps,
On pleasing projects, in which perhaps
We'd vie to see who'd do the best,
Nor cared who won—dear friendship's
test.

Now, on the trail I'll go alone,
Alone I'll search for gem-like stone;
All by myself I'll carry on
With sphere and flat and cabochon!
"So long" Old Pal, with sad regret
I hear you've bought a TV set.

Herbert C. Monlux of Los Angeles, who has had 25 years' experience polishing lenses and rocks, promised to give Pasadena Lapidary Society members some tips at the April meeting. Monlux assisted in polishing the huge lens for Palomar Observatory.

Colorado Mineral Society craftsmen are busy at their work benches, finishing jewelry for display at the Denver Hobby Exposition in September.

Winter snows melted, the Earth Science Club of Northern Illinois began planning field trips again. First one scheduled was to the Cave of the Mounds, located at Blue Mound, 25 miles west of Madison, Wisconsin. Guided tours are conducted through the cave.

Four Peaks, Arizona, yields some of the most beautiful amethyst ever found. Bob Dye, who worked at the Four Peaks Amethyst Mine for several years, told fellow members of San Diego Mineral and Gem Society's mineral resources division about his experiences there.

Nick and Bunny Gessler recently returned to California after living in Peru for nine years. Both are collectors, not only of stones but also of jewelry, textiles and Peruvian artifacts. They told about their experiences in the South American country and showed pictures and items from their collection at the April meeting of Hollywood Lapidary Society.

Mt. San Antonio College, Pomona, California, has announced an advanced mineralogy course on the summer program. The class, in the extended day program and open only to those with some previous training in geology or mineralogy, will be taught by Darold J. Henry. Hours are from 7 to 10 p.m. Tuesdays and Thursdays. Inquiries should be directed to the college's Dean of Summer Session.

Inspiration Consolidated Copper Company's open pit mine at Inspiration, Arizona, was visited by a field trip group from the Mineralogical Society of Arizona. Members of the company staff directed the group to and through the open pit, explaining operations and answering questions. Special blasts had been set off the day before to loosen specimen material, and the rockhounds gathered minerals characteristic of the area.

N.O.T.S. Rockhounds of China Lake, California, scheduled an April field trip to Calico. R. R. Van Pelt would lead a tour through the area, directing members to choice travertine, petrified palm wood and sagenite agate sites. Chosen campsite was Tin Can Alley. A trip was planned to the Lavic jasper area on Sunday.

At its April meeting, Gem Cutters Guild of Los Angeles enjoyed a movie, "Crystal Clear," presented by the Pacific Telephone and Telegraph Company. Afterwards, Samuel Sklarew of San Fernando Valley Gem and Mineral Society discussed the culture of rutile crystals and synthetic quartz crystals.

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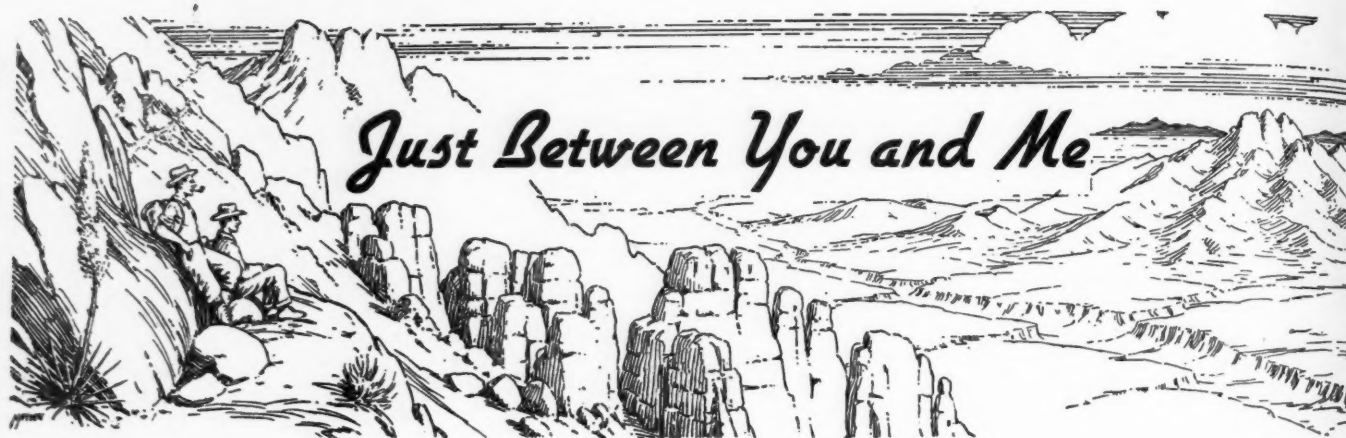
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By RANDALL HENDERSON

FOR MANY years one of my favorite camping grounds was the Arizona desert region north of Yuma between the Colorado River and the Yuma-Quartzsite road. More recently this road has been paved, making the region more accessible than formerly.

And now, I have learned that the armed forces have moved in and have appropriated a considerable part of this huge area for target practice, and have posted it against trespassers.

Apparently the generals and the admirals have discovered they can obtain jurisdiction over great areas of desert terrain merely by issuing a requisition for it. And they are making the most of it. While it is very difficult to get exact information, I am told that more desert terrain is now off limits to civilians than at any time during World Wars I and II.

We Americans have always been ready to make whatever sacrifice was needed in time of national emergency—but if the big brass is going on the assumption that desert terrain is worthless terrain and that they can declare a permanent national emergency which will entitle them to seize it at will, then it is time for you and me to start writing letters to our congressmen.

* * *

Recently I spent a weekend in Baja California seeking a canyon in the Sierra Juarez which has been reported to have a very fine stand of wild palm trees.

I never found the canyon for which I was looking, but I spent several hours in Palomar Canyon (*Desert*, Feb. '47). The desert willow, which really is a catalpa, was in flower—also the palo verde and ocotillo. Vegetation grows luxuriantly in Palomar, and the landscape was a riot of color, such as one would find only in a desert canyon.

The botany books will tell you that the flower of the desert willow is pink. Actually, the blossoms range in shade from white to a deep lavender, and there must be a generous helping of honey in each bloom for the trees were swarming with wild bees.

In another month the yellow blossom of the palo verde, the red of the ocotillo and the white-pink-lavender of the willow will give way to the deep blue of the smoke tree. Of the eight native trees in this desert land—palo verde, smoke tree, ironwood, mesquite, wild apricot, palm, Joshua tree and willow, all except the mesquite have very conspicuous and lovely blossoms. It seems to be part of Nature's scheme of things that this land of little rainfall should compensate in beauty for what it lacks in the volume of its plant life.

For the information of those *Desert* readers who have the opportunity occasionally to visit the fine art exhibit in our *Desert Magazine* pueblo in Palm Desert, a 5½-day schedule will be in effect through the summer, until October 15.

During the winter months we keep the gallery open seven days a week, and have more visitors on Saturday and Sunday than during the other five days combined. The summer schedule is from 8:00 a.m. to 5:00 p.m. Monday through Friday, and until 12:00 noon Saturday.

Visitors are always welcome here, and there is no charge for admission.

* * *

In Arizona the state legislature has passed laws which make it a misdemeanor to paint signs or inscriptions of any kind on the native rocks along the highways. I am sure most readers of *Desert Magazine* will share my opinion that these are good laws.

Much of the pleasure of travel is in the enjoyment of the landscape along the roadside. I have little tolerance for those unimaginative persons who despoil the scene by daubing paint on the rocks. Sometimes it is commercial advertising, sometimes the names or initials of little people with big egos—exhibitionists, they are called. Still another group includes those fanatics who would reform the world by splashing in big letters the admonition to "REPENT," or the announcement that "JESUS SAVES." I hope the good Lord will have mercy on the misguided soul of one who is guilty of such desecration.

* * *

Spring weather on the desert has been delightful this year, but there are hot days coming. And that is the way it should be. This wouldn't be much of a desert if we didn't have a blistering sun pouring down on us for three or four months of the year.

If this arid Southwest had a perfect all-year climate it would become too crowded with human beings. There would be a resort in every canyon and a cocktail bar at every waterhole. And so we should thank heaven for the heat.

Those who can afford to do so, and have the time, will go to the coast or the mountains when school is out. And the rest of us—the majority—will stay home and cuss the heat and with few exceptions be just as happy as we would elsewhere. Hot weather is not a serious annoyance to people with good health and active minds.

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Books of the Southwest

COLORADO RIVER VOLUMES LISTED IN BIBLIOGRAPHY

More than a century ago the first Americans to come to the West found the Colorado River and its tributaries an important source of beaver furs. Since that period the great Colorado system of waterways has played an increasingly important part in the development of the Southwest.

Many volumes have been written about the river, its history, geology, navigation, wildlife, resources and development, and a selective listing of these books has been compiled by Francis P. Farquhar of Berkeley in a little bibliography under the double title, *The Colorado River and The Grand Canyon*.

Included in the bibliography are 125 titles classified under nine general headings and dedicated to Harold C. Bryant, superintendent of Grand Canyon National Park and Otis Marston, canyoneer and river chronicler.

The list of books is designed to furnish within certain limits a comprehensive view of the Colorado River basin and its human history. Sixteen titles, for instance, are devoted to the utilization of the waters for power and irrigation. There are 31 titles covering the early history, seven books relating to Mormons on the Colorado River, 20 volumes on the navigation, 12 on geological studies.

Limited edition published by Glen Dawson of Dawson Book Store in Los Angeles. 75 pp. Index. \$5.00.

MUSEUM REPORT ON KIVA MURAL PAINTING OF ANCIENTS

Though highly technical, the Peabody Museum's latest report on its excavations on Antelope Mesa in northeastern Arizona is fascinating material for artists and archeologists. The report is a discussion of kiva mural decorations at Awatovi, at nearby Kawaika-a and at other pueblos in the Southwest.

After a background discussion of the Awatovi site and of Indian ceremonial practices in general, Author Watson Smith describes the paintings, their layout, designs, colors and ceremonial meanings, the techniques and materials used by the Indian artists. The reader also learns the field methods employed by the archeologists in excavating, preserving and reproducing the murals.

Of particular interest to artists are the nine color plates, done in serigraph (silk screen) by Louie Ewing.

Published by the Peabody Museum, 348 pages, 64 halftone figures, 9 color plates, 28 line illustrations in the text. Index. \$7.50 paperbound; \$10.00 bound in cloth.

BIBLIOGRAPHY ANALYZES LEGEND OF BILLY THE KID

In the New Mexico range country where he lived, fought, killed and died, William Bonny is regarded today as a kind of Robin Hood of the Southwest. Lincoln County New Mexicans, par-

ticularly the Spanish-Americans, like to tell their children stories of Billy the Kid, "a good boy who was misunderstood by some and made a scapegoat by others."

Billy was killed by Sheriff Pat Garrett in 1881; but he still lives on in books, magazines, ballads and folklore. Billy the Kid has become a legend.

In a new publication of the University of New Mexico Press, J. C. Dykes presents a bibliography of this legend.

Billy the Kid, the result of years of research and compilation, not only gives complete facts in all versions but is a valuable reference catalogue for the historian, collector and student of Southwest Americana.

Published by the University of New Mexico Press, 186 pages, index. \$3.50.

Books reviewed on this page are available at Desert Crafts Shop, Palm Desert

Why the Noonday Siesta?

If the Mexican needed an excuse for his after-dinner siesta, he might well blame overeating. Anyone who knows the gustatory delight of tacos, enchiladas, frijoles, chile con carne, tamale pastel and other succulent Mexican dishes would understand.



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MEXICAN COOKBOOK, by Erna Fergusson—More than 100 recipes with step-by-step preparation notes, gathered by a native New Mexican and well-known Southwestern author. 120 pages\$2.00

THE GOOD LIFE: NEW MEXICAN FOOD, by Fabiola Cabeza de Baca Gilbert—Delightful stories of New Mexican customs and folklore preface recipes from soup to after-dinner Cafe con Leche. 94 pages.....\$3.50

SPANISH-MEXICAN COOKBOOK, by Don Carlos—Authentic recipes of every dish popular in the Southwest and Mexico today. 147 pages.\$2.00

And, though it has nothing to do with siestas, **Bill Magee's Western Barbecue Cookbook** by Ed Ainsworth is another excellent guide to typically Southwestern good eating. Take the guesswork out of barbecuing with recipes gathered by a master barbecuer in 55 years of cooking at the pit. 225 pages.....\$3.00

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